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Pink Floyd's Nick Mason On The Band's Final Album

**WOULD YOU WEAR THIS WOOFER?**   
Woojer Puts The Bass Up Close And Personal

# SOUND & VISION

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LIRPA  
LABS  
MZ1-949r  
SOUNDBAR  
P46

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APRIL 2015

**A CLASS ACT:** Krell's Chorus 7200 Amp Delivers Class A Sonics Just When You Need It

## SHARP'S \$5,000 UNIVERSAL DISC PLAYER

DOES HIGH-RES WIRELESS  
REALLY WORK?



## THE SVS PRIME SATELLITES

ARE A BUDDING AUDIOPHILE'S  
VALUE DREAM COME TRUE



## PLAYING WITH PLAY-FI

DEF TECH'S WIRELESS  
COLLECTION SPREADS  
FINE MULTIROOM SOUND,  
BUT IS THAT ENOUGH?



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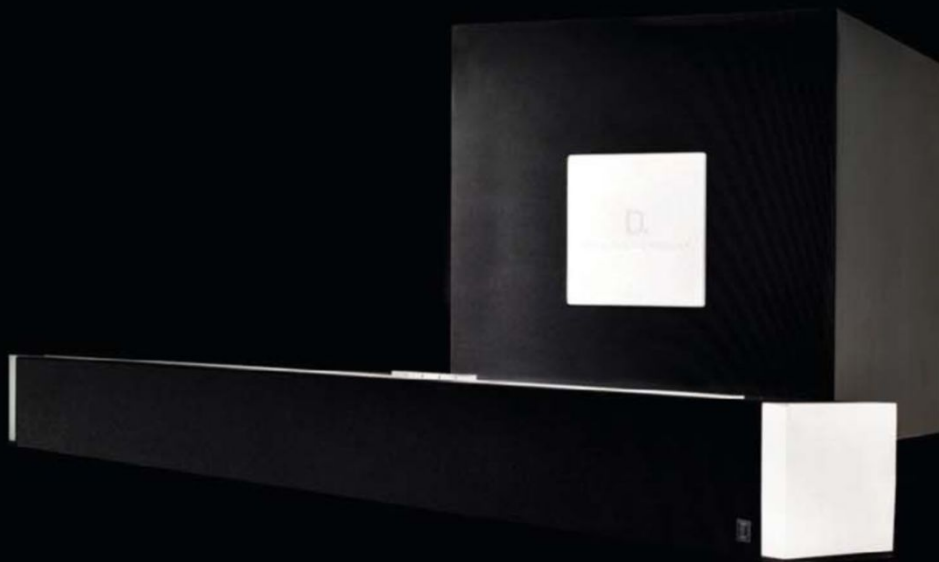
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# DEFINITIVE TECHNOLOGY W STUDIO SPEAKER OF THE YEAR CES 2015



The Definitive Technology W Studio Wireless Soundbar was named Speaker of the Year at this year's CES.

And while we're honored with the accolade, we can't say we're surprised. We created the Definitive Wireless collection to redefine what multi-room wireless music systems should sound like.

Because we understand you want flawless audio quality no matter what room of the house you're in.

**D.**

DEFINITIVE TECHNOLOGY

WHAT OBSESSION SOUNDS LIKE



# Preview

**ON THE COVER** Sharp's \$5,000 Universal Disc Player: Does High-Res Audio Wireless Really Work? Additional gear from Definitive Technology, Krell, Logitech, SVS, and Woojer.



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Comfortably Done



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# THE DEFINITIVE TECHNOLOGY WIRELESS COLLECTION



## Adapt

Brings the latest music services to existing audio systems

## W9

Audiophile-grade wireless speaker

## W7

Audiophile-grade wireless speaker

## Studio

Sound Bar System with Wireless Streaming

## Amp

Transforms existing speakers into a music streaming system

You shouldn't compromise on sound quality when you're not in your designated listening room. The Definitive Technology Wireless Collection brings our award-winning, high-performance sound to a family of wireless products that bring audiophile grade sound to any room in your home.

**WHAT OBSESSION SOUNDS LIKE**



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«This soundbar outdoes any other I know of in bass dynamics and extension, loudness, and overall impact»

Dan Kumin  
**SOUND & VISION**

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Steve Guttenberg



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# GoldenEar's 3D Array Soundbar is "Absolutely Unbelievable"

— Darryl Wilkinson, *Home Theater Magazine*



3D Array \$999

FF3 \$499

**"Most exciting soundbar demo I heard"**  
— Brent Butterworth, *Sound&Vision Magazine*

We call the SuperCinema 3D Array, quite simply, "an extra-ordinary high-end loud-speaker system disguised as a soundbar." It is designed to combine the form factor of a sleek, stylish soundbar, with the performance of a true, high quality, component system. The complete ultra-high-performance system would include a powered subwoofer and a receiver or separates; plus the 3D Array achieves superb three-dimensional surround performance with or without rear surround speakers. Its 2.7" thin cabinet is constructed of aircraft-grade aluminum and contains six of GoldenEar's signature cast spider leg basket bass/midrange drivers and three High-Velocity Folded Ribbon Tweeters along with our breakthrough 3D Technology that cancels interaural crosstalk distortion for total sonic immersion.



High-Velocity Folded Ribbon Tweeter (HVFR™)



High-Definition Cast-Basket Bass/Midrange Driver

**"Awesome just got redefined"**

— Darryl Wilkinson, *Home Theater Magazine*

The 3D Array sounds amazing and the experts certainly agree. Al Griffin of *Sound & Vision* wrote that the 3D Array System, "...delivered at least 90% of my main rig's [Triton Two Towers] performance." Chris Martens of *The Absolute Sound* raved, "...a soundbar system so good that audiophiles might buy it for music playback alone...if asked to recommend a soundbar to please finicky, hypercritical audiophiles, this would be my hands down choice." And *Home Theater*'s Darryl Wilkinson summed it up perfectly when he raved that, "the width and openness of the soundstage was absolutely incredible" calling it "an instant classic" that is "a must-listen-to, top-of-the shopping list, soundbar-to-beat...when it comes to soundbars awesome just got redefined."

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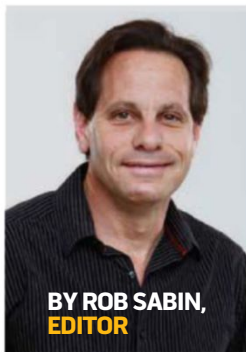
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April 2015

# TrackOne

## ARE U READY FOR 4K?

### UHD Blu-ray and HDR Made News at CES



BY ROB SABIN,  
EDITOR

As I write this, we're fresh back from our annual pilgrimage to Las Vegas for CES. For me, the most exciting news for home theater buffs swirled around Ultra HD, both the launch of the first HDR (high dynamic range) UHD televisions and the announcement of details on forthcoming UHD Blu-ray Discs.

We explained HDR in a feature in our January issue, but when that went to the printer we assumed Dolby Vision would be the widely adopted solution for bringing HDR's uber-highlights to sets and that it would take a while before we saw affordable TVs that could achieve HDR-like peak brightness. Nor did we expect to see the required HDR-encoded content to be coming anytime soon.

But nearly all the TV makers showed prototypes or introduced models with HDR technologies. Samsung will introduce sets later this year that, to my eye, provided among the most impressive of all the HDR demos. Perhaps more critically, a new partnership among movie studios (Disney, Warner, Fox), post-production firms (Dolby, Technicolor), content distributors (DirecTV, Netflix), and TV manufacturers (Samsung, LG, Sony, Sharp), called the UHD Alliance, was also announced to ensure that Ultra HD content can take advantage of the wider color gamut and higher brightness that the UHD standard and new HDR sets can deliver. Notably, "premium" UHD content will offer the DCI-P3 color gamut currently being used for digital cinema distribution—a logical approach since studios are already creating content for it, and it's a good interim solution until both programming and displays can evolve to the even wider Rec. 2020 gamut built into the UHD standard. As a side note, Netflix announced at CES that it would start streaming HDR content later this year for viewing on the new Samsung sets as well as Sony's new HDR-capable models.

Meanwhile, the Blu-ray Disc Association offered reporters an early peek at the recently settled specs for the new 4K Blu-ray format, which will officially be called Ultra HD Blu-ray. Here are the basics:

- Images will have up to 3840x2160 pixels (UHD resolution), at up to 60 frames per second, with the content carried on either 66-gigabyte dual-layer discs or 100-GB triple-layer discs. (The discs have multiple layers of data that the laser transitions among seamlessly.) A "digital bridge" option for UHD disc content would allow it to be viewed on a portable device or moved to a hard drive video server at the content owner's discretion.
- Players must support color gamut up to Rec. 2020 limits, which theoretically future-proofs them for the day that both content and affordable displays can achieve that, and they must support 10-bit color depth. Players must also provide backward compatibility with all regular 1080p Blu-ray Discs. DVD and CD playback support is optional.
- Players must be able to support the SMPTE 2084 criteria for brightness and contrast defining a high dynamic range (HDR) display.
- Players must provide HEVC (H.265) decoding of compressed content. The spec includes the latest HDMI 2.0 and HDCP 2.2 digital interface, as well as HDMI 1.4, but doesn't mandate either in lieu of new developments in digital interface technology that will surely crop up over the life of the standard.

Will UHD Blu-ray offer a premium in image quality over streaming? Well, let's put it this way: Netflix is currently said to be streaming HEVC-compressed UHD content at bitrates around 15 megabits per second. By comparison, dual-layer UHD discs can hit up to 108 mbps, while triple-layer discs will do 128 mbps. What do you think?



**Reporters  
were offered a  
peek at the UHD  
Blu-ray standard.**

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# GoldenEar has Engineered Our New Triton One to Perform Like a \$20,000+ Super Speaker!

*"Triton One shames some speakers costing ten times as much ... it is an absolute marvel"* – Caleb Denison, *Digital Trends*



*"Revelatory ... cosmically orgasmic ... these speakers absolutely embalm the competition"*

– Darryl Wilkinson, *Sound & Vision*

*"Best High-End Value at CES 2014 ... Sandy has created a speaker that defies its price point"*

– John Sciacca, *Residential Systems*

*"Best of CES 2014 ... stunning realism ... the sound was truly grand and majestic"*

– Roger Kanno, *SoundStage*

*"Best Sound for the Money at CES 2014"*

– Jonathan Valin, *The Absolute Sound*

– Kirk Midskog, *The Absolute Sound*

– Neil Gader, *The Absolute Sound*

When three of The Absolute Sound's top reviewers all choose the same product for their own "Best Sound for the Money" honors, you know it is something truly very special, epic and iconic. Introducing the Triton One, an evolutionary speaker that builds upon all the advanced technologies that have made the Tritons mega-hits around the world. This new top-of-the-line flagship was engineered to deliver even better dynamics and bass than the extraordinary Triton Two, along with further refinement of all aspects of sonic performance. How well have we succeeded? In the words of HD Living's Dennis Burger, the Triton One delivers, "... the sort of upper-echelon performance that normally only comes from speakers whose price tags rival a good luxury automobile".

*Triton One "creates visceral, tangible waves of pure audio bliss"*

– Dennis Burger, *HD Living*

Great sound is what it is all about and the Triton Ones deliver, as The Absolute Sound's Chris Martens raved, "*The Triton One offers excellent clarity, highly three-dimensional imaging, subwoofer-grade bass depth and clout plus fine levels of low-end pitch, definition and control*". The Ones were specifically engineered to excel with all types of music as well as movies. Best of all, they offer previously unheard of value, as Brent Butterworth wrote in *Sound & Vision*, "*I heard a few people saying the Triton One sounded like some \$20,000-and-up high-end towers, but I disagree: I think they sounded better than most of them*". Darryl Wilkinson summed them up best, "*A Masterpiece ... GoldenEar has fully ushered in the Golden Age of the Loudspeaker*". Hear them for yourself and discover what all the excitement is about.

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# GoldenEar's ForceField Subs: "Near perfect... a tour de force"

— Andrew Robinson, *HomeTheaterReview.com*



FF3 \$499

FF5 \$999

FF4 \$699

## "Thunderous...Room-Shaking"

— Al Griffin, *Sound&Vision Magazine*

GoldenEar's ForceField subwoofers are true over-the-top super subs that are especially remarkable for their compact size and unusually affordable prices. All three incorporate the same advanced technology and components including: DSP controlled high-power digital amplifiers (1000, 1200 or 1500 watts), ultra-fast long-throw high-gauss magnet structure drivers (8", 10" or 12") and pressure-coupled downward-firing quadratic planar infrasonic radiators. In addition, their uniquely shaped cabinets are not just attractive, but are also purposefully configured for dramatic performance benefits.

## "Extraordinary bass prowess... I've never heard a sub this small go that deep"

— Steve Guttenberg, *The Audiophile*

With their high output capability, stunning impact, superbly musical bass articulation and breathtaking infrasonic low frequency capabilities, the ForceFields have received the highest praise from critics, experts and knowledgeable listeners around the world. Geoff Morrison of Residential Systems raved, "their thunder filled the room." AV Forums praised the, "monstrous output for such a small sub." Mark Fleischman of *Home Theater* wrote, "I was dumfounded" over their, "low frequency barrages with floor-shaking confidence." And to top it off, the British writer Stephen May raved, "this astonishing box can pressure-load a room like an angry Silverback" and Andrew Robinson warns, "Your walls, floorboards, and ceiling may just crap out on you." And, as Dennis Burger of *Tech Tell* observed, they are also, "shockingly musical!"

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April 2015 Volume 80/Number 3

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# "Top-Pick-of-the Year...GoldenEar's Triton Seven is One of the Great Steals in Audio Today"

— Sound & Vision Magazine

*"a masterpiece of value oriented engineering—one that sets a performance standard that will not be easily matched or surpassed"*

— Chris Martens, *The Absolute Sound*

*"Stunning...a new standard...scores a perfect 10 with music and home theater"*

— Steve Guttenberg, *The Audiophile*

GoldenEar's Triton Two and Three Towers have set new performance and value standards all around the world. Now, our extraordinary new Triton Seven follows in this auspicious tradition, bringing award winning Triton performance to a more compact size and even more affordable price range. The Seven's strikingly attractive and acoustically purposeful cabinet shape incorporates a precise rearward rake for a time-aligned coherent wave launch directed at ear level. A complex Linkwitz/Riley crossover perfectly blends the D'Appolito Arrayed twin 5.25" cast basket bass/midrange drivers and signature High Velocity Folded Ribbon tweeter for high-resolution reproduction of both music and cinema. And dual side-mounted sub-bass radiators deliver impactful, superbly detailed, subwoofer quality bass performance.

*"Editors' Choice...a stunning example of how audiophile-grade sound can come from a speaker nearly anyone can afford"*

— Caleb Denison, *Digital Trends*

The Absolute Sound's astute, highly critical writers often disagree, but not when it came to the Triton Seven. They all went absolutely bonkers! At the recent CES Show, four of their writers, including the editor, awarded it their highly coveted, "Best Sound for the Lowest Price Award." But even more importantly, a fifth writer, Alan Taffel, awarded it his, "Most Significant Product Introduction at CES (at any price)" honors. Why most significant? Because the Seven makes true high-end performance affordable for almost anyone!

*"The Triton Seven is going to be on nearly everyone's short list for Speaker of the Year"*

— Darryl Wilkinson, *Home Theater Magazine*

GoldenEar loudspeakers are the creations of industry legend Sandy Gross, whose Grand Prix Award winning speakers have been impressing and delighting reviewers and listeners for over 40 years. They are available worldwide at the finest audio/video specialty dealers. You must hear them for yourself. Visit our website to learn more and to find your nearest dealer.



Triton Seven Tower  
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# Letters

We welcome  
questions and  
comments

**E-mail them to HTLetters@sorc.com.** Please note: Questions about the features and functions of a particular product are best directed to the manufacturer. Questions about what product you should buy are best directed to a dealer who knows all the details of your system, your preferences, and your personal habits. All submissions are considered the exclusive property of *Sound & Vision* magazine and TEN: The Enthusiast Network. We reserve the right to edit letters for brevity. Due to the volume of mail that we receive, we regret that we cannot respond to every letter.

## Jacked Up...Again

Responding to Mark Fleischmann's response to "All Jacked Up" (Letters, December), I either did not clearly make my point, or he missed it completely. Yes, I agree that surround sound processing is best handled in the receiver or surround processor. But there are not many if any receivers that are going to have DACs as good as the one in the Oppo BDP-105 or a few other universal Blu-ray players. So, conversion from digital to analog from multichannel surround music on SACD and DVD Audio discs are best handled in the Oppo and passed to the receiver through the multichannel analog inputs. The receiver should not be converting these to analog. I realize that not many people are listening to SACD and DVD-Audio discs, but those of us that do should not be left out.

**James Dean**

via e-mail

I've been a fan and collector of high-res music software since 2002. I have my Oppo BDP-105 hooked up to my Yamaha receiver via 5.1-channel analog, HDMI, and two-channel analog and have done many A/B comparisons. The 5.1 analog beats the pants off the HDMI input for clarity, depth, and soundstage, especially in Pure Direct mode. That is the entire selling point of the Oppo BDP-105 over the BDP-103. It was manufactured and designed for those who are after the best sound, unlike those who are satisfied by the one-wire HDMI solution.

**Vincent Cortese**

via e-mail

## Why Yes, They Should

I want to know why even high-end TV manufacturers deliver sets with the RGB so far off that you have to hire an outside tech to get the best picture. There should be a reset button that would set it to specs.

**Don DeLisi**

Tampa Bay, FL

*For those not familiar with the more technical aspects of our HDTV reviews, it should be explained that, depending on the preset viewing mode selected for a set, it will show a different red-green-blue color balance in its reproduction of white or gray. More often than not, televisions are set at the factory to give white a subtle (or not so subtle) icy-blue tint. This helps them look*

## CORRECTION:

In our February/March issue review of the JVC Diamond DM65USR Ultra HDTV, we reported that the set had no facility for HDMI ARC (Audio Return Channel). In fact, ARC is accommodated on HDMI 4. We apologize for the error.

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—Mark Fleischman  
Sound & Vision Magazine

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**Fathom® IWS**  
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## LETTERS

*brighter and pop more on retail sales floors and can also add punch to images in the bright viewing environments some people prefer to watch in. Since we come at this as dark-room purists who want to see a movie reproduced as the director and colorist saw it on their studio monitor, we always start by setting the television under test to the picture preset mode that is intended to mimic the industry standard for white point. That should deliver essentially neutral whites/grays or perhaps lean very subtly toward pink. Along with an accurate "gray scale," this setting should also place the television's red, green, and blue color points to deliver a color gamut that matches the range of colors typically used to master movie content for video.*

*The A/V historians among you will recognize the significance of even having a mode like this (typically the Movie or Cinema mode) built into modern HDTVs, much less accessible controls in the regular user menu to make precise adjustments to the white point. Back in 1994, when Joel Silver founded the Imaging Science Foundation to publicize what was really wrong with the image on consumer television monitors and began trying to fix it, every TV looked icy-blue, and making tweaks meant hacking into cryptic service menus that could do serious damage if you hit the wrong button. The early ISF calibrators were outlaw pioneers. It took ISF and other activists years to get TV makers to accept that a portion of consumers believed in and would even pay more for image accuracy, and to start including facilities to allow people to tune the sets in these critical areas.*

*That brings us, finally, to Don's question, for which I have no good answer except to say that most TV manufacturers, at this point, do try to deliver a near-perfect Rec. 709 image in at least one of their preset video modes. The fact that they often are much further off out of the box than we expect is likely a reflection of different factors. Some sets are genuinely not engineered well, but more often than not, manufacturing tolerances probably throw off the final result. HDTVs for the mass market typically don't enjoy a dedicated hands-on calibration at the factory, or they are allowed a wider tolerance in the quality control process than any ISF tech should stand for. Then there are the subtle variants that come into play with different color meters and the calibration software we all use to measure these TVs. Bottom line: If you get a TV home and set it to the mode set to most closely follow Rec. 709, you'll probably get something pretty close to right. That's good enough for most viewers. If you're spending big bucks on a state-of-the-art TV and you really want to extract the very best performance from it, consider paying for an outside calibrator. It can make a world of difference.—RS*

## Sub In, Sub Out, Revisited

I wanted to chime in regarding the response that was printed in your letters regarding the advantages and pitfalls of having a separate subwoofer versus all-in-one full-range cabinets ("Sub In or Sub Out," January).

Although both replies have merit, I was surprised that neither of the respondents brought up the problem of phase cancellation. The ear (aka human brain) is most sensitive to phase issues at lower frequencies. When sound emanates from two or more sources, the sound waves will run into each other. More to the point, as the low-frequency waves collide—if they are in phase—they add together (combine) to create frequency bumps. When out of phase, they cancel each other out to create valleys in the response curve.

This fact of life disrupts the listening position, as it is impossible for all frequencies (different wavelengths) to arrive at our ears without some frequencies combining while others cancel out. In acoustics, these are known as room modes. In a perfect world, we would employ a single-point-source loudspeaker and eliminate all reflections in the room to do away with phase problems. And although the use of a center cluster often works better than the alternatives in a hockey arena, mono audio systems sound boring and flat in a home theater or two-channel listening space.

With this in mind, coming to a solid conclusion is almost impossible. On the one hand, if you cut off the low frequencies of your full-range cabinets to allow a single sub to do the work, you reduce phase cancellation in the all-important low-frequency range. But a dramatic cutoff sounds less natural than a nice full-range pair of loudspeakers. It is also important to note that as you lower the frequency, the less directional the sound will be. In other words, high frequencies beam, while bass is everywhere. So if you use two subs, unless they're time-aligned and targeted, it will only make things worse.

A better approach would be to try to control the excessive bass in the room in order to reduce hot spots and bass dips. This is best achieved using bass traps that are able to absorb energy below 100 hertz. By reducing bass echo in the room, you will increase the sweet spot (optimal listening position) and have a fighting chance of hearing a more natural-sounding bass in your room.

**Peter Janis**

**President & CEO**

**Radial Engineering Ltd**

Port Coquitlam, Canada

Hafler, Primacoustic, Jensen-Transformers,

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# Perfect focus

## NEW GEAR, TOP NEWS, HOW TO, AND MORE...

Edited by Claire Crowley

# Sound Before Convenience

### ● Meridian MQA Lossless Processing

A genius never stands still. Bob Stuart, digital audio pioneer and inventor of the Meridian Lossless Packing format that forms the basis of Dolby TrueHD, recently launched MQA (Master Quality Authenticated), which he modestly calls a “revolutionary British technology” that will change the way we hear music. Truth is, given Stuart’s track record, you have to take his proclamation seriously. Early listening sessions

suggest that he may be onto something. Something big.

MQA is a proprietary digital encoding system used during recording or mastering that captures “extremely high-frequency timing and detail in an audio signal” and encapsulates it in a form that can be streamed or downloaded via FLAC or any other lossless file format. The technology uses an advanced sampling method based on neuroscience and psychoacoustic

research showing how we identify and locate sounds and the idea that timing details of a few microseconds are important. It also uses sophisticated metadata containing details of the recording and instructions for the decoder and D/A converters on how to build the output file or stream.

An MQA decoder reconstructs a signal that is identical to the original studio master, according to Stuart, and works with sampling between 44.1 and 768 kilohertz. Without a decoder, MQA files play back in CD quality. MQA-encoded music is able to convey “all of the nuances of the original performance,” Stuart says. “It’s as though up until now we’ve been listening with ear muffs. We’re taking away the distracters.”

The technology has been under development for years because “until recently, there wasn’t so much understanding of exactly how it is that we listen and how it is that the sounds of nature and the sounds of the real world impact us,” explains Stuart, who has a background in



psychoacoustics and electrical engineering. “And when we listen to music, we want to be hearing the sounds naturally.”

The Explorer<sup>2</sup> portable USB DAC (shown here) is one of the first Meridian products to incorporate an MQA decoder. It remains to be seen how quickly the audio and music industries will adopt MQA, but Stuart says the format is receiving broad support in the music industry.

If Meridian has its way, the days of sacrificing sound quality for convenience may be over. Watch these pages for more on MQA.

—Bob Ankosko

#### Meridian

(646) 666-0140  
meridian-audio.com





# This Just In...

By Mark Fleischmann

## CableCARDS in Cable-Op Provided

set-top boxes outnumber those in TVs and retail boxes by 50 million to 623,000. Describing the underlying encryption integration ban as a "burden," the cable industry is trying to persuade the FCC to end its CableCARD mandate...



### Vizio Sponsored the AFI Fest

for the American Film Institute in Hollywood. Among many other niceties, attendees got to charge their phones and enjoy a drink while watching P-Series TVs showing Ultra HD content...

### Pioneer and Onkyo

moved ahead with a merger that has Pioneer buying a 14.95 percent stake in Onkyo, making it Onkyo's third biggest shareholder after Otsuki Strategic Holdings and Gibson, the guitar manufacturer. What will happen to Pioneer's world-class AVRs and other audio products was unknown at press time...

### The Urban Movie Channel

launched from the folks at BET. It includes documentaries, comedies, horror films, and stage plays. A free trial through February 4 gave



way to a \$2.99/month charge...

### TV-Everywhere Viewers

will quadruple from 5.6 billion in 2010 to 11.32 billion worldwide by 2020, predicts Digital TV Research. Traditional-TV viewing share will drop from 73 to 42 percent as more people use computers, smartphones, and tablets, with the average person using 2.13 devices...

### 'Cannibalistic' Streaming Services

like Netflix and Amazon are eroding ratings for ad-supported TV, reports Todd Buenger, an analyst for Sanford C. Bernstein. "The trend is more likely to accelerate than decline"...

### Dish Network Lost 12,000

subscribers in the third quarter of 2014, versus a gain of 35,000 the year before. However, revenues still rose 5.3 percent, so Dish is making more money from fewer customers...

### Netflix and the BT Group

have agreed to integrate the streaming service into the U.K. telecom provider's YouView platform. Virgin Media, the U.K.'s largest cable operator, already provides Netflix via TiVo...

### TiVo Is Adding Vudu

to the app roster on its Roamio DVR and TiVo Mini set-top box. A 2015 update will bring Vudu to older TiVo Premiere DVRs...

### Roku Has Added Google Play

Movies & TV to its streaming roster for North America and Ireland. It works on players introduced after June 2011 and support for its smart-TV platform will follow...

### Sony's Video Streaming Service

was due to launch before the end of 2014. It was rumored to offer up to 100 channels at a cost of \$80/month...

### Sonos Is Beta-Testing an App

for Android Wear devices. Wouldn't you like to control your multi-room audio system with a smart watch?...

### Bluesound Will Integrate Tidal's

CD-quality lossless music service into its wireless streaming audio products. This will stream a 25-million-track library through home networks...



### Multi-Account Sonos Users

can switch accounts with a controller app now in beta testing. If you're an Android user, you can control Sonos from the lock screen...

### Microsoft OneDrive

will soon add music storage to its free cloud storage service. Even better, an extra 20 gigabytes of free storage is coming with it...

### Unlimited Cloud Photo Storage

is the latest attraction of Amazon Prime membership. You can use iOS, Android, and Amazon's own tablets and smartphones to upload your pix at full resolution...

### Taylor Swift Slammed Spotify

as she pulled her music out of the low-paying streaming service. Because it's a drag giving away your work for next to nothing...

### iTunes Revenue Declined

by nearly a billion dollars in fiscal year 2014, said the company's SEC filing. News reports generally included the word *streaming* and the name *Spotify*...

**Albums Sales Are Dropping,** with 23 percent of

music-streaming customers dropping their former album-a-month purchase habit. MIDiA Research projects download revenue to drop by 39 percent by 2019, only five points less steeply than the already-plummeting CD format...

### Another Xbox One Price Drop

may be in the offing, if rumors of a new processor are true. The lower-cost processors would reduce the price beyond the \$349 holiday-season level...

### An Emergency Alert Notification

was accidentally broadcast by an FM station in Tennessee. Viewers in a half-dozen states were told: "The station has interrupted its regular programming at the request of the White House to participate in the Emergency Alert System"—but alas, no apocalypse...

### Onkyo Added Spotify Connect

to 2014 AVRs. For owners of 2011 and newer AVRs and pre/pros, Onkyo also added the Remote 3 control app...



# Handson

## Woojer Wearable Woofer

By Bob Ankosko

# Get Into the Groove

**PRICE \$99; TWO FOR \$179**

**CAN A SMALL DEVICE THAT CLIPS** to your belt produce the visceral sensation of a live musical performance or the deep, pulsating bass felt in a dance club? Can it wow mobile gamers with spine-tingling bass?

Kickstarter-funded Woojer ("See Me, Feel Me," April 2014) aims to do just that with a "wearable subwoofer" that connects between your music player (or any audio source) and headphones. Technically speaking, Woojer is a polyphonic tactile transducer that converts audio frequencies below 500 hertz into low-frequency vibrations to "make your body feel like it is exposed to high acoustic energy."

I was intrigued by the premise (and somewhat skeptical), so I got my hands on a Woojer and tried it out with JBL Synchros E40BT headphones and a handful of audio sources, including an iPod nano loaded with a variety of music.

### Small n' Simple

A little bigger than a matchbox, it's a simple device with an integral belt clip/chest magnet, a micro USB charging port, and two minijacks: one for your headphones and one for your audio source. Apart from an on/off switch, the only control is a three-position switch for adjusting the intensity of the vibration. Turn the Woojer on and two LEDs appear on its face: a blue LED that flashes in sync with the bass and a green "on" indicator that turns orange when the battery is low and red when the unit is overdriven. A rechargeable lithium-ion

### AT A GLANCE

#### + Plus

- Extra boom for bass hounds, especially fans of hip-hop and dance music

#### - Minus

- Clunky
- Can create a buzzing sensation when worn on a belt
- One more wire to deal with

battery keeps the Woojer going for 3 to 4 hours, depending on the intensity of the music, vibration level, and volume.

The company offers an optional app with a bass-boosting equalizer and presets for different types of headphones and music genres; the iOS version is available for free in the App Store, and an Android version is on the way.

Woojer is careful to point out that you have to experiment with placement for the optimal effect and that the best position will vary from person to person. Recommended hotspots are the sternum, collarbone, hip, and spine. The belt clip has a removable magnet for attaching the device to clothing: You put the magnet under your shirt and place the clip side of the Woojer over it to lock it into place. Warning: If you have a pacemaker, the Woojer is most definitely not an option for you!

### THE VERDICT

**Woojer is not for everyone**, but it can add a visceral element to mobile listening that may appeal to gamers and fans of dance, hip-hop, and other bass-driven music.

### RATING

#### Woojer Wearable Woofer

Performance ★★★★★

Features ★★★★★

Ergonomics ★★★★★

Value ★★★★★



### Boom Town

Ready to enter into the Woojer Zone, I fired up my iPod and listened to a broad variety of music—from hip-hop/rap/dance to pop/rock to classical music and film scores. I focused on material with really big bass—which meant hip-hop was in heavy rotation—while experimenting with different placements and vibration settings.

I started with the Woojer attached to my belt, first opposite my spine and then near my hip, and alternated between the "Dance Workout" and "Weekly Top 50 – Hip-Hop/Rap" stations on iTunes Radio. Woojer produced vibrations that accentuated the pulsating bass on tracks like "Froot" by Marina and The Diamonds, but they felt disconnected from the music and created a mild buzzing sensation—sort of like when my phone is in vibrate mode. Weird. When I pushed the Woojer up against my body, the sensation became more palpable...but that sort of defeats the purpose.

Moving up my body, I used the magnetic clip to position the Woojer next to my collarbone. The sensation was stronger than the hip location, but I found the little box to be clunky when I attached it to my shirt. I moved the Woojer to the center of my chest, which proved to be the sweet spot, providing the most compelling effect over several hours of listening. There I was, standing in the middle of my (home)

office groovin' to Wilkinson's "After-glow"—not exactly my usual routine (and something no one should see). But, again, the chest thumping came closest to a true club vibe only when I pressed the Woojer against my body. The company sells a chest strap (\$15) for working out, which is probably the way to go if you're serious about getting your groove on.

I moved into more familiar pop/rock territory with songs with driving bass lines like AC/DC's "Thunderstruck" and "Message in a Bottle" by The Police, which were great fun. Film scores for *Iron Man 2* and *Transformers: Revenge of the Fallen* became all the more menacing with the Woojer pressed up against my chest.

This device is not for everyone. Some will find it clunky (as I did); others will find it gimmicky. But with careful positioning, the little take-anywhere device can add a visceral dimension to bass-rich music and video-game or movie soundtracks.

### SPECS

**Controls:** Three-position vibration-level control switch, on/off switch

• **Features:** Integral belt clip with removable chest magnet, rechargeable lithium-ion battery, green/red LED to indicate on/off and overdriven; blue LED that flashes in sync with vibrations • **Dimensions (WxHxD, inches):** 1.6 x 2.7 x 1.1 (including clip) • **Weight (Ounces):** 2.6 • **Connections:** Micro USB (for charging), 3.5mm analog audio (1 for player, 1 for headphones) • **Accessories:** USB charger with cable, male-to-male minijack audio cable, carrying case • **Available Colors:** Black, white, red, green



Woojer • (646) 328-3916 • woojer.com



# The Connected Life

JOHN SCIACCA

## Gone in Sixty Seconds



A few years ago, I attended a product demonstration at CES by a company famous for touting how durable its hard drives were. In fact, the company—ioSafe—calls its products “disaster proof hardware” and used CES to deliver extreme, over-the-top demonstrations to prove just what kind of damage their drives could withstand and still protect all of the data stored within.

One year, ioSafe set one of its drives on fire, sprayed it down with a fire hose, dropped it onto concrete from 20 feet up, and *then* drove over it with a backhoe. Another year, they let members of the press blast a drive with a 12-gauge shotgun. At the demonstration I attended, they put a drive in a “Cage of Death” and repeatedly zapped it with a million volts of electricity. Each year, the data on the drive survived, proving the company’s claims in a spectacular manner.

More unforgettable for me, however, was a little stunt ioSafe’s CEO, Robb Moore, played on a group of journalists, including myself. Before the demo, Moore suggested we place any sensitive electronic items that might be damaged

**Much of what is precious to us these days can be boiled down to digital data.**

from the electricity into a Faraday cage for protection. Not wanting to risk losing anything, we all dutifully handed over our laptops, cell phones, and digital cameras. When the demo concluded, Moore walked over, tripped on some cabling, and knocked the Faraday cage holding all of our gear into a giant tub of water.

There was an audible gasp as we all sat there, looking at our gear submerged in the water, trying to come to terms with what just happened. Then tension was palpable: You could feel each person taking a mental inventory of all the information and work they likely just lost.

Moore milked the tension for several moments before showing us our gear was actually safe; ioSafe had swapped in a dummy cage while we were distracted with the demo. He then gave the demo *coup de grâce*, asking how we all felt at that moment, when we thought we had lost everything, but then discovered that all of our data was really safe and sound?

It was an incredibly effective and impactful



demonstration, and if you’ve ever suffered a major virus, Blue Screen of Death, or other moment where you feared you’d lost a drive, then you’ll understand that gut-wrenching sense of loss. Much of what is precious to us these days can be boiled down to digital data: family memories captured in digital pictures and videos, music and movie collections, contact databases and records, documents and financial info. All of this resides on hard drives in various locations and is susceptible to loss by a variety of factors.

Since the price of storage has plummeted, many people have invested in external drives that can be used to back up and store tons of information. The drawback to most of these solutions is that they require some effort and diligence on the part of the owner to remember to connect to the drive and back up their data. Plus drives are still susceptible to failure or damage from disasters like flooding or fires. Even a “disaster proof” drive like the ioSafe could be lost or stolen.

An all-but-foolproof method is backing up data to the Cloud. Short of being hacked—sorry, Sony and Jennifer Lawrence—data in the Cloud is all but impervious to any kind of loss. It is also retrievable from anywhere in the Internet-connected world, keeping it not only safe and secure but making it easy to access from whatever computer, phone, or tablet you happen to be using. It’s also terrifically convenient if you find yourself frequently working off multiple computers, as the Cloud drive lets you access, work on, and sync files from any machine.

A variety of services are available, from free solutions offering limited amounts of storage to subscription-based offerings that provide additional features and virtually unlimited storage size. Many services will also store multiple versions of a file, which will prevent loss in case the local version becomes corrupted. Some of the most popular services include Backblaze, Carbonite, CrashPlan, and SugarSync (which I use).

Regardless of which solution you choose, having your data in the Cloud is the safest way to ensure it will never be lost. And while it might “just” be a video of your child’s first step, as a parent, I can assure you that when you think you’ve *lost* that video, it is worth every penny of the plan’s subscription fee.

## Smart TVs: Who’s Watching Who?

“I’m terrified of my new TV,” said legal eagle Michael Price in his blog for the New York University School of Law’s Brennan Center for Justice. His Samsung Smart TV came with a camera and microphone for gesture and voice control—and a 46-page privacy policy.

Price worried that the TV is logging “where, when, how, and for how long you use the TV,” using cookies to detect viewing and interaction with content, apps, and e-mails, while routinely ignoring do-not-track requests. Price quoted the privacy policy: “Please be aware that if your spoken words include personal or other sensitive information, that information will be among the data captured and transmitted to a third party.” The camera and mic may be on even when the TV is supposed to be off.

“I do not doubt that this data is important to providing customized content and convenience,” wrote Price, “but it is also incredibly personal, constitutionally protected information that should not be for sale to advertisers and should require a warrant for law enforcement to access.”

Media analyst Gary Arlen commented in *Multichannel News*: “These are valuable research features that give TV makers information they have never known about their customers. They also provide more intimate research capabilities than Nielsen. Hence they offer enormous value to program creators and distributors.” But, Arlen added, Samsung’s privacy disclosure “does little to inform viewers how or what personal data would be swept into the cloud for infinite future analyses.”

Samsung replied to Arlen: “We work to ensure that the personal data of our consumers remains secure and our products are not privy to hacker vulnerabilities. We monitor security risks in our Smart TV platform to make sure our existing products meet the latest security standards and new products are inoculated against malware and other risks.”—MF



## Sound Strategies



**I plan to purchase a new A/V receiver and a set of 5.1 speakers. What strategy will deliver a better all-around experience: spending more on the speakers or on the receiver? Should I splash on speakers, with the idea that my receiver can be upgraded in a few years, or vice-versa?**

*Simon Bolster / via e-mail*

I'd strongly recommend weighting your home theater audio budget toward the speaker side of the equation. Receivers tend to become outdated every few years as new features and capabilities get introduced. Consider all the new tech that's been added to receivers in the past two to three years alone: Dolby Atmos, HDMI 2.0, 4K upscaling, AirPlay—the list goes on. And while the first generation of receivers touting fancy new features are often pricey, those same features usually filter down into less expensive mainstream models fairly quickly.

Speakers, on the other hand, are about as stable a product category as there is. A 5.1 speaker system bought to convey Dolby Digital soundtracks on the then-new DVD format in 1997 could easily be used today (with a few enhancements) for Dolby Atmos soundtracks on Blu-ray. Also, most speaker manufacturers' step-up models usually provide improved sound quality over entry-level models—something that's particularly true with subwoofers.

So yes, invest the bulk of your money in speakers. Receivers fall in and out of fashion following the latest audio trends, but your speakers will be with you for the long haul.

### Should I spend more on my speakers or receiver?

**I have a home theater system powered by an A/V receiver for watching movies, but I also want to connect a turntable and separate stereo amp to the system's front speakers for listening to music. If a speaker has biamp connections, can you connect two separate sources to it? I want to connect the stereo amp to top jacks on my speakers and my A/V receiver to the lower jacks. Will that work?**

*Clint Yarborough / via e-mail*



No, it will not. Here's why: Those dual input jacks on the back of your speakers are intended for biamping, not connecting separate sources.

Take a look at the back of your speakers. You'll see a pair of metal jumpers that connect both sets of input terminals and enable the audio signal to flow to both the tweeter/mid-range drivers and the woofer. Inside the speaker is a circuit called a crossover that filters the mid and high frequencies from low-frequency portions of the audio signal and directs them to the appropriate drivers. When you disconnect those jumpers, however, you can use separate stereo amp channels to independently power the speaker's midrange/tweeter drivers and woofer. The benefit to biamping is often cited as increased headroom, though you can also get the same result by instead using a more powerful amp.

**I have a Denon receiver. Since the receiver has no phono input, I purchased a Pfan-tone AMP2 phono preamp so I could play records through it. The preamp works, but the volume level is low, even with the Denon's volume turned all the way up. A friend suggested that the preamp simply doesn't have the power to provide full stereo sound. Is this correct, or is there some other explanation?**

*Shaun Herron / via e-mail*

Pfanton AMP2 phono preamp? Since I'm totally unfamiliar with that brand, I did a Google search, which turned up one or two listings for used models selling on eBay. It also turned up this hilarious post from way back in 2003 on the Audio Asylum forum: "I happened to be walking by an audio/electronics (warning!) retailer today, so I popped in and bought a little beauty called the Pfanton AMP2 Solid State Phono Preamplifier for the grand total of \$32. The near total absence of any bottom end is impressive all on its own. Norah Jones sounds like she's singing from the bottom of a well, with only mid- and high-frequency strings as backup. *Take Five* now sounds like one of those wax disc archive recordings. Stay away from Pfanton, Pfriends."

To judge from your experience, and from the experience of the AA poster, the Pfanton AMP2 is a poor-sounding, poorly made product. The only other scenario I can think of is that it's designed for moving-magnet phono cartridges and that your turntable has a moving-coil cartridge, which has a much lower output level. Either way, buyer beware.

## CBS Bows News Channel

CBS has taken the wraps off CBSN, a 24-hour video streaming news channel. You can tune in (so to speak) to [cbsn.cbsnews.com](http://cbsn.cbsnews.com) from 9 a.m. to midnight ET, and there'll be a live anchor to serenade you with crises. Presumably, repeats will run in the wee hours. Viewers are not limited to the live feed—they can also access prior segments. The channel's news and sports content will be original, though it may switch to the on-air network for breaking news. In addition to the Website, CBSN is also accessible on Roku, Fire TV, and the CBS News Windows 8 app, with an Android app due at press time. The Tiffany Network hopes to capture the eyeballs of traditional TV news viewers as well as freshly minted streaming viewers.—MF



## DirecTV Will Do UHD

The good news is that DirecTV is becoming the first pay-TV operator to offer Ultra HD programming. The bad news is that so far, the effort is limited to Samsung TVs, and programming to live events and 30 movies from Paramount and K2 Communications. You'll also need a Genie HD DVR with broadband connection. The recently launched *Ariane 5* satellite is the key to DirecTV's UHD operation, along with a new slice of satellite spectrum. The satellite also provides additional local HD programming. DirecTV will soon have company, with Comcast preparing a UHD launch as this was written in late 2014.—MF







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### Finish Options

-  Black ash
-  Walnut
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## Better and Worse Angels



I'm shopping for a new TV. Should I buy an older technology that performs well and costs very little, or a newer technology that is better but costs more? Specifically, I'm trying to decide which LCD to buy—HD or 4K? Two angels have landed on my shoulders. As you might expect, they have very different points of view....

### Do the Right Thing

The angel on my right shoulder is gently coaxing me to buy a 4K TV. She recites all the advantages of 4K. Most significantly, 4K resolution is clearly superior to any HDTV. Do the math: 3840 x 2160 versus 1920 x 1080—that's four times the resolution! Just look at the detail in that picture! Imagine what a huge, theatrical-size screen you could get! Don't forget that manufacturers usually put their best technologies in their 4K TVs; it isn't just the number of pixels—4K TVs are often the best all around.

Buying a 4K is also smart because you future-proof yourself. You should never

### If I don't support 4K, how can I expect anyone else to?

buy older technology; you're just hastening obsolescence. It's best to get ahead of the curve. Why spend money on an HDTV that you'll most likely replace in a few years? Go ahead and get a 4K—that will be a wise investment for many years to come. Short-term, its upscaling will make lower-res content look great, and as 4K content ramps up, everything will just get better and better.

Beyond the technical advantages of 4K, she reminds me of the ethical imperatives. Every fledgling technology needs nurturing by early adopters to help it leave its nest. Turning your back on a new technology is tantamount to killing it. Conversely, the more people who buy 4K TVs, the more 4K content will

appear, and that will spur sales of 4K TVs—chickens and eggs! Last, she reminds me that I am a tech guy; if I don't support 4K, how can I expect anyone else to? I didn't buy 3D, and look what happened to that. I am morally obligated.

### Don't Be Stupid

The angel on my left shoulder has other opinions. She argues that it would be a serious mistake to buy a 4K TV. Whenever a new technology comes along, manufacturers and retailers start hyping it. HDTV is inadequate, you must have 4K, blah, blah, blah. If you believe that load of bull, you deserve a 4K. Ouch.

For starters, 4K is a solution in search of a problem. That kind of resolution may be OK on a phone that's a foot from your eyes, but unless your screen is gargantuan (say, 80 inches), it's useless on a TV at a normal viewing distance. Your eyes simply cannot resolve that extra resolution. Besides, pixel count is irrelevant; a 12-MP camera is certainly not inherently better than an 8-MP camera; only suckers buy cameras based on the number of pixels.

4K is evil! It killed plasma and in comparison, 4K's contrast ratio, off-axis viewing, and motion resolution are all mediocre. Don't forget that 4K doesn't magically appear. It requires fatter pipes or, more likely, even greater compression. In the real world, because of artifacts from increased compression, your 4K could look absolutely terrible.

Speaking of 4K content—there isn't any. By the time native 4K content ramps up, your 4K TV will be old; new 4K TVs will be better and cost less. Why take the financial hit now on a 4K TV when you can't utilize its benefits for years to come? Someday, 4K will be ubiquitous, but for now, it doesn't make any sense.

Finally, in a clever bit of psychology, she argues that worrying about TVs is a first-world problem that I should be ashamed of. I shouldn't buy a new TV. But if I must buy something, I should humbly get HD.

Wow. Their incessant chatter is driving me nuts. Now I am just totally confused. I guess that means I should get a curved 4K 80-inch OLED?

## RIP, Apple Clickwheel

Students of the user interface are in mourning for Apple's clickwheel, which passed away quietly in Cupertino, California, at the age of 13.

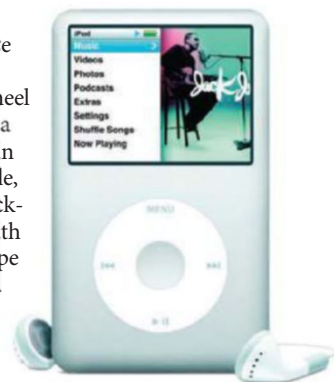
The clickwheel was born in the original iPod in 2001 and died in late 2014 along with the last product to use it, the iPod classic. In iPods, it was supplanted by touchscreens starting with the sixth-generation nano. The iPod itself has been nudged aside by other touchscreen devices such as smartphones and tablets from Apple and other manufacturers.

Why kill the clickwheel? "We couldn't get the parts anymore," Steve Cook told Engadget, explaining that retooling the product for a shrinking music-player market wasn't worth the exertion.

The final iPod classic's generous 160 gigabytes of storage will also be missed. The surviving iPod touch tops out at 64 GB and the iPod nano at 16 GB.

But most regrettable of all is the fact that future generations of listeners will never know what it's like to whiz up and down the contents of a pocketable music library with the circular thumb gesture that made the old clickwheel the simplest, easiest, and most pleasurable-to-use music access interface of all time.

The clickwheel is survived by a crude vestige in the iPod shuffle, but that's a click-only wheel, with no thumb swipe and no related display.—MF



## Kadeidescape Bows Cloud Player

Kaleidescape's Alto (\$2,495) is the company's first cloud-based movie player. Use its 4-terabyte hard drive to store up to 100 movies in HD or 600 in SD. More than 8,500 movies and 1,600 TV shows have been licensed from Warner, Sony, Lionsgate, and NBCUniversal, with more expected. One thing Alto will not do is import from DVDs or Blu-ray Discs, something that got its earlier movie servers dragged into court. The company now prefers to do business in the Hollywood-approved way. Is everybody happy?—MF







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# Reference Tracks

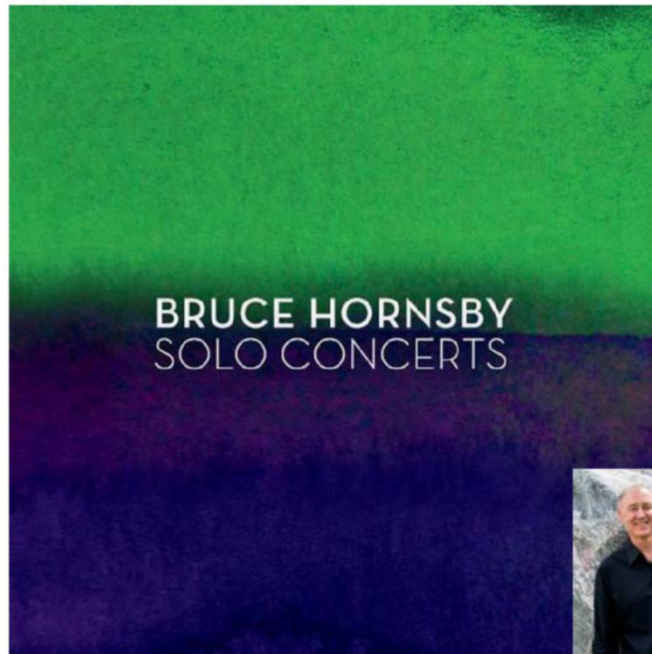
MIKE METTLER

## Master Pianist Bruce Hornsby's Ongoing Quest to Capture Live Keyboard Sound



Bruce Hornsby could never be accused of being an artist who rests on his laurels. "I'm such a different musician in every way than I was 20 years ago," he admits. Prime evidence of the master pianist's ongoing creative evolution can be found all over the double-disc *Solo Concerts* (Vanguard), where Hornsby explores a variety of styles from behind the keyboard: everything from blues 'n' boogie to New Orleans funk to the tenets of modern classical music. He also recasts the character of some of his best-known songs, such as turning "The Valley Road" into a blues vamp and giving "Mandolin Rain" an indelible bluegrass stamp.

Hornsby views playing a song the same way twice as akin to being in "a creative prison." And, he feels, "if you're a musician who's interested in being a life-long student who continues to grow and evolve, frankly, you're generally going to want to move on from that." Here, Hornsby, 59, and I discuss his philosophy of A/B'ing to find the proper live SQ baseline and how he "makes friends" with new pianos. Push-



ing the creative envelope—that's just the way it is with Bruce Hornsby, and we hope it's something that never changes.

**MM:** In terms of sound quality, how do you know when your live mix sounds good? Was there a specific philosophy about how you wanted the *Solo*

*Concerts* shows to be recorded?

**BH:** We often A/B to other records, something that we think is a sonic kindred spirit. For example, we A/B'ed the *Solo Concerts* record to a Keith Jarrett solo record. It's interesting, because so many of them sound different to each other. They vary to me, sonically. Some are very dry, some are more reverberant, some are brighter than others. It's just interesting. I generally like all of them.

There are certain piano sounds I like, but I tend to like a "round" sound. I don't like it really bright. My first couple of records were big pop successes on radio, and they were really bright, so people sort of pegged that as "my" sound, where in reality, I didn't like it at all. It sounded good on the radio. Somehow the radio compressors make "The Valley Road,"

"The Way It Is," and "Mandolin Rain" sound pretty good, but I'm not a fan of those records sonically. They sounded thin to me if you were listening to them in your house or your car.

**MM:** What are the tells that let you know, "OK, this concert hall is a good space for me. I'm going to have a good time playing here"?

**BH:** It generally happens during soundcheck once I get onstage, because I have to make "friends" with a new instrument every night. There's an amazing variety in the quality of instruments, but Steinways are always very solid. Some are stiffer than others, and some feel like organs, but in a good way—real light, like a Horowitz piano was, with light action. Some are tough and stiff, some are dark and dull, and some pianos are really bright, so you have to watch it if you bang on them. I'm not much of a "banger" player at all. But if I get a dull piano in the left-hand bass-area register, I'll tend to hit

it harder. It doesn't tend to get you much more bark out of the bass, but I have to save my hands for later in the set.

I have monitors up there with me, but there are only two things that are in them: the vocal,

and the reverb of the piano. Sometimes halls are real dry and I like to have a little sonic pillow there, which makes me feel better to play in that situation. So I'll have my engineer Wayne [Pooley] dial in just the reverb of the piano, and not the piano itself. I need to do it this way to hear the sound of these songs that's in my head.

*An extended version of the Mettler-Hornsby Solo Concerts Q&A appears in The S&V Interview blog on soundandvision.com.*



Photo by Katherine Fisher

Photo by Michael Martin

### CD

**LABEL:** Vanguard

**AUDIO FORMAT:** 44.1-kHz/16-bit PCM Stereo

**NUMBER OF TRACKS:** 21 on 2 CDs

**LENGTH:** 1:32:08

**PRODUCER:** Bruce Hornsby

**ENGINEER:** Wayne Pooley





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# Handson

## Arcam irDAC USB DAC

By Mark Fleischmann

### Book DAC

**PRICE \$699**

**THE USB DAC IS THE MISSING** piece in many of today's audio systems. Most A/V receivers have iOS-friendly USB inputs, but few have the PC-friendly kind. If you want to connect a computer's USB output to your system, you probably need something like the Arcam irDAC to mediate between computer and system.

#### AT A GLANCE



Plus

- PC-worthy USB DAC
- iOS-worthy rear USB input
- Coaxial, optical inputs



Minus

- No headphone amp

The irDAC is purely a converter. It does not drive speakers or headphones and does not serve as a volume-controlled preamp. It is about the size of a thick paperback book and has a wall-wart power cord. The size is sensible, big enough to fit in some serious circuitry—including eight separately regulated power supplies—but not

big enough to take up much space on a desktop or in a crowded rack. You might even stand it on its side, leaving a footprint of just 1.8 inches wide by 4.8 deep.

Stereo analog and coaxial digital outputs are provided to feed an audio system. The back panel has two of every kind of input—coaxial digital, optical digital, and USB (one Type A, one Type B)—represented by indicators on the front. A button on top cycles among the inputs.

Setup was pretty easy. I used the irDAC with a USB connection to a Lenovo Windows 7 PC. USB Class 1 (up to 96 kilohertz) works out of the box. Getting up to 192-kHz resolution requires a procedure that's become familiar to me in numerous USB DAC reviews: I downloaded the driver from the Arcam Website, connected the two devices, toggled the USB Class switch from setting 1 to setting 2

on the back panel, and installed the driver on my PC. Then I designated the Arcam as the default sound device in the Win 7 Control Panel and chose 192/24 as the default output format. The last step was to open Foobar 2000, my high-res playback software, and select the Arcam driver in the Output menu. If your library is limited to bitrates of 96 kHz or less, you needn't bother with this. I did it just to play the few 192-kHz files I have.

I took the irDAC on a tour of music I love using mostly Apple Lossless CD rips. It generally displayed a warm, inviting tone not unlike that of Arcam's high-performing (and pricey) A/V receivers. While it did not indiscriminately sweeten everything it touched, it definitely had a

#### THE VERDICT

About the size of a thick paperback, the Arcam irDAC is a USB DAC that will make your audio files—from lossless to lossy—sound great.

#### RATING

##### Arcam irDAC USB DAC

Audio Performance ★★★★★

Features ★★★★★

Ergonomics ★★★★★

Value ★★★★★



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personality of its own that mingled with the music.

In the title track of Jan Akkerman's "Passion," the dominant melody of Bach's *St. Matthew Passion*, it plumbed the complex nuances of the well-recorded acoustic guitar. But it didn't flinch from the techno percussion and digitally processed guitars in Akkerman's "In Between the Sheets," from *C.U.* I was less pleased, however, with its treatment of Rossini's "Barber of Seville Overture," with Claudio Abbado conducting the London Symphony Orchestra in his DG collection of *Rossini Overtures*. The strings seemed slightly canned and reticent.

Linda Thompson's complex soprano on "Love's for Babies and Fools," from *It Won't Be Long Now*, is a litmus test I use to detect edginess. The irDAC aced the test, providing all of the beloved voice's beauty and

none of the side effects. It also made the duet between June Tabor and John Jones on the Oysterband cover of Joy Division's "Love Will Tear Us Apart," from *Ragged Kingdom*, a feast of vocal texture and color. It's one of those recordings that sounds good on everything but great only on the best gear.

I auditioned both the stereo and mono mixes of the Beatles' "Girl," the song from *Rubber Soul* that features a sharp intake of breath on the John Lennon vocal. The irDAC did the best it could on the stereo mix's skewed perspective, with all instruments at left and all vocals at right, but it needed the mono mix to display its finest qualities: a judicious warmth that reveals more than it conceals. At this point I fell into the bottomless hole that is *The Beatles in Mono* (digital version), and the next several hours went unrecorded in my notebook.

Stepping up to high-res material, the Arcam navigated the first two Led Zeppelin reissues in 96/24 FLAC. In "Babe I'm Gonna Leave You," a storm of acoustic and electric guitars and percussion from the untitled debut album, the irDAC preserved the track's characteristic warmth but also extracted the dynamism of the new remix. "Whole Lotta Love," from *Led Zeppelin II*, was a feast of ingeniously recorded guitar textures, and the irDAC's presentation of it was the best I've heard from any DAC functioning with my desktop system.

I used the irDAC primarily for its USB input, but Arcam's spokesperson was quick to point out that, with its coax and optical input options, it could constitute a great audiophile upgrade for any device with a digital output, from an old CD

player to a modern-day media streamer like Apple TV. I didn't try any of those inputs, but what I can tell you is that, from inherently flawed lossy MP3 files to the highest-resolution material in my library, the irDAC made nearly everything sound great. If versatile virtuosity is

what you want in a DAC, the irDAC delivers.

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## SPECS

7.7 x 1.8 x 4.8 in (WxHxD) • 1.54 lb

• **Audio Inputs:** Coaxial digital (2), optical digital (2) • **Audio Outputs:** Analog RCA (1), coaxial digital (1) • **Other:** USB-PC, USB-iOS • **Sampling Rates:** Up to 192 kHz, 24 bits • **Upsampling:** None • **DAC:** Burr-Brown 1796

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# NewGear

THIS MONTH'S HOT STUFF...

## ♦ Monitor Audio Airstream A100 DAC/Amplifier

The Airstream A100 gets our vote for Most Stylish Audio Component. When we first saw the little amp at CEDIA Expo, we wondered if the Brits had gone mad. Why were they showcasing a router? The A100 is more than just a pretty face with its 2x50-watt Class AB amplifier, high-resolution digital-to-analog converter, DLNA and AirPlay compatibility, and Wi-Fi connectivity with apps for Spotify and Last.FM. Connections include an optical digital input, stereo analog inputs and preouts, and a subwoofer output. It even has an Airstream Direct mode for "router-free music." **Up or Down:** Whether it's standing tall or lying on its side, the A100 can be used on its own or as part of a TV-based setup. Available in black or white. **Price:** \$500

**Monitor Audio • (905) 428-2800 • monitoraudioua.com**



## ♦ Hall Research 4K Javelin Optical HDMI Extension Cable

The brainiacs at Hall Research have figured out how to significantly extend the range of HDMI cables using optoelectronics. Proprietary circuitry in the 4K Javelin cable converts video signals into light pulses so they can be transmitted up to 200 feet with "zero loss" and without an external power supply (power is drawn from the 5-volt signal pin of the source HDMI output). **Twist and Shout:** In addition to being thin and lightweight, the cable is flexible with a bend radius of 0.2 inches and supports "any resolution or color depth, including non-standard video formats" up to a maximum data rate of 10.2 Gbps (3.4 Gbps per channel). Cables are available in 50-, 75-, 100-, 150-, and 200-foot lengths at prices ranging from \$295 to \$650.

**Hall Research • (800) 959-6439 • hallresearch.com**



## ♦ Combine 9 Woodrow AV Credenza

The vintage industrial look is not for everyone, but those who dig rough-hewn furniture will appreciate the one-of-a-kind Woodrow media console, featuring steel mesh doors, a cold rolled steel frame with rivets, and a selection of vintage woods. **True Vintage:** The Woodrow is built to order using reclaimed wood, including teak from the deck of the U.S.S. *California*, a battleship sunk during the attack on Pearl Harbor (while supplies last). A variety of finishes and styles are available, and consoles can be ordered with or without shelving, partitions, and casters. A 90 x 20 x 20-inch version of the cabinet (as shown) with a shelf, two storage compartments, and a back panel with a 2-inch gap to accommodate wiring sells for \$2,350.

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### → **Yamaha YAS-203 Soundbar System**

A decade before the "soundbar" even existed, Yamaha was blowing minds with the all-in-one YSP-1 Digital Sound Projector, which used 42 drivers and digital signal processing to create a convincing surround sound experience by projecting focused beams of sound around the room. Today the company sells more than a dozen soundbars, including the YAS-203, featuring Dolby Digital and DTS Digital Surround processing, Bluetooth streaming with aptX coding for CD-quality, Android/iOS app control, and a compact wireless subwoofer. **Two'll Get You Seven:** Air Surround Xtreme technology produces a virtual 7.1-channel soundfield from a slim 35 x 3 x 5-inch enclosure. Unlike conventional multi-driver soundbars, the YAS-203 creates its surround magic using signal processing and only two full-range drivers. **Price:** \$400

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### → **Triad Inroom Bronze LR-H Dolby Atmos Speaker**

Speakers have been predictably boring for decades: a couple drivers in a rectangular box with a black or woodgrain finish. The advent of Dolby Atmos, with its ability to place sounds above the listening space, has given rise to "Atmos-enabled" speakers for those who want immersive surround sound without having to cut holes in the ceiling. One of the first such models is Triad's

19.5-inch-tall LR-H, which uses four upward-firing 2-inch full-range drivers to bounce sound off the ceiling while a fabric-dome tweeter and two 5.5-inch woofers deliver main-channel sound.

**Pick a Color:** The standard finish is black, white, or one of 17 wood veneers, including cherry, walnut, zebra, mahogany, teak, rosewood, and six shades of oak. Or Triad will match your favorite color. **Price:** \$1,000/pair

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● David Gilmour behind the console.

Jeremy Young

# Comfortably Done

Nick Mason and Andy Jackson take us inside *The Wall*. By Mike Mettler



“It’s a very common name. Back of \$20 bills, that’s me.” Producer Andy Jackson is typically self-effacing as he leans back in a chair across from me in front of the massive 48-track Neve 88R console that dominates the control room on the *Astoria*, the grand Edwardian houseboat recording studio moored on the Thames somewhere near Hampton, Middlesex in England. The *Astoria* was built in 1911 for English theater mogul and music-hall comedian Fred Karno, and three-quarters of a century later, it was purchased in 1986 by Pink Floyd’s chief sonic architect for the past four decades, David Gilmour, who oversaw its transformation into a top-drawer recording studio. Fast-forward to late August 2014, where I’ve been summoned across the Pond to come aboard the *Astoria* and partake in an exclusive listening session for *The Endless River* (Columbia), which has since been deemed the final Pink Floyd album.

Finding the *Astoria*’s relatively clandestine Thames mooring was a bit of an adventure. I took a cab from my hotel near Heathrow Airport to a construction-laden street where I’m eventually buzzed onto the grounds through a nondescript wooden brown door I initially walked past twice. (Sorry for the saucerful of secrets—I signed an NDA I think may still lay claim to all of my home theater gear if I reveal too much about the locale.) I’m ushered down a counterclockwise-winding stone path to a cozy, many-windowed reception building, which also

features a kitchen nook where staff and artists alike come to nosh during recording breaks—and sometimes listen to playback piped in from the nearby houseboat studio. The gear on the shelves and floor in the snug, naturally lit waiting room area is decidedly vintage, including a Cambridge Audio Azur 340C CD player, Technics SV-DA10 DAT recorder, Sony STR-D390 receiver, Alesis Monitor One studio monitors, Yamaha YST-SW305 subwoofer, and wood-finished Tannoy speakers (I didn’t want to push my luck by swiveling them around to check the model number).

When the appointed listening-session time arrives, I pass through a lush garden to walk the plank and board the impressive vessel. I pause in the narrow passageway that leads to the control room to peer inside a minuscule gear closet that houses a pair of Studer a827 tape machines, Quantam Scalar i80 tape library, and Otari MTR100 24-track 2-inch-tape reel-to-reel—“all slightly underutilized,” according to Jackson. “They used them for transfer, but we haven’t recorded on them in a very long time.” Ah, the tales that gear could tell about a band that, as evidenced by the overall top-shelf sonic excellence of *The Endless River*, continues to define the very concept of “high fidelity, first class” for audiophiles and mainstream listeners alike.

## It’s What They Do

*The Endless River* began to flow during the 1993-94 sessions for *The Division Bell*. It was graced with additional new material created by

Floyd mastermind David Gilmour and founding drummer Nick Mason, all of it framed beautifully by the many pivotal contributions of late Floyd keyboardist Richard Wright. (Founding bassist/vocalist Roger Waters left the band amidst much acrimony in 1983.) In late 2013, Gilmour and Mason reconvened in England to record said new material to complete *The Endless River*, a mostly instrumental album that takes its rightful place alongside other key entries in the band’s storied canon. It’s also a fitting tribute to Wright, who passed away from an undisclosed form of cancer in 2008.

Produced by Gilmour, Phil Manzanera, Youth, and Andy Jackson and engineered by Jackson, Damon Iddins, and Phil Taylor, *The Endless River* is a bold and powerful statement from a band known for many decades of sonic superiority and compositional excellence. *River* courses with that grand tradition as an album enveloped by the ethereally timeless aural cocoon all great Pink Floyd records reside within. It’s available in a multitude of formats, including a double-LP set pressed on 180-gram vinyl mastered by Doug Sax at The Mastering Lab in Ojai, California; double-disc deluxe box sets featuring Jackson’s expansive 5.1 DTS-HD Master Audio and PCM mixes in 96-kilohertz/24-bit on Blu-ray or DVD; and high-res 96/24 downloads via both HDTracks and Acoustic Sounds Super HiRez. *River*’s 18 tracks are sequenced into four specific movements, or “Sides,” and each one carries its own particular



vibe, from the keyboard wash *sturm* and soaring guitar *drang* interplay of Side 1's "It's What We Do," the abject percussive fury of Side 2's "Skins" (recalling Mason's explosive October 1971 *Live at Pompeii* poundings), the ivory-tickling solemnity of Side 3's "The Lost Art of Conversation" and elegiac "Autumn '68" (the latter track containing a sampling of Wright's heavenly pipe-organ runs at The Royal Albert Hall on the night Floyd was banned from ever playing there again), and the uplifting ride of Side 4's wistful yet hopeful closing statement, "Louder Than Words"—the only song graced by Gilmour's distinctive, impassioned vocals. Mason revisits the process of putting it all together when he and I sat down in the Sony Club in New York on the eve of *River*'s release in November: "It was like panning for gold in a big pile of rocks," he recalls. "But I really loved playing on this album. It was an opportunity to rediscover or rework tracks we'd played on and then got the chance 20 years later to review what we did and decide whether we liked it or were going to change some aspect of it—like play a different fill, or whatever. It was terrific."

In a statement, Gilmour confirmed, "We listened to over 20 hours of the three of us playing together and selected the music we wanted to work on for the new album. Over the last year, we've added new parts, re-recorded others, and generally harnessed studio technology to make a 21st-century Pink Floyd album. With Rick gone, and with him the chance of ever doing it again, it feels right that these revisited and reworked tracks should be made available as part of our repertoire." In New York, Mason confirmed with me his own official statement about Wright: "*The Endless River* is a tribute to Rick. I think this record is a good way of recognizing a lot of what he does and how his playing was at the heart of the Pink Floyd sound. Listening back to the sessions, it really brought home to me what a special player he was."

*River* debuted at #1 in the U.K. and at least 20

other countries, and #3 in the United States. In early December, I called Jackson at his home in England and asked how Gilmour and Mason responded to him about the album's success after I read they were "thrilled and surprised" by its reception. "We always knew it would divide people," the producer acknowledges, "but it's been more favorable than we expected, to be honest. And that's good."

### The Big Divisional Spliff

During the original *Division Bell* sessions, Jackson put together an essentially ambient record compiled from outtakes that he winkingly dubbed *The Big Spliff*. While never officially released, it was a poorly kept secret among Floyd fans. "That was the original gestation of this project, Andy's initial assembly," Mason clarifies. "I think we owe an awful lot to that."

Sometime after Wright's 2008 passing, Gilmour decided to revisit those sessions. "David said to Phil Manz [Manzanera], 'Go and see what we've got,'" confirms Jackson. "It was quite intriguing. And then it went to Youth, who had a poke at it. He extrapolated some stuff and did some weirdness—that is, he did what he does—and then we all got together to listen to it and said, 'Yeah, I think we've got a record here.'"

By concurrently working on his own first solo album, *Signal to Noise* (see sidebar), Jackson was more attuned to what Gilmour needed to achieve once he decided to do a lead vocal for the album's final track. "When David was working on the beginnings of the vocals for 'Louder Than Words,' I realized how much more aware I was of melody and the things he was doing," Jackson says. "I was able to react to it better. He'd be trying different things and I'd say, 'It's really good when you use *that*.'"



● The Endless River

### Ebb and Flow

According to Jackson's production notes, Mason first got behind the drum kit on the *Astoria* to lay down his new *River* tracks on November 11, 2013. The kit was set up in a familiar space adjacent to the control room. Before settling in for my listening session, I had a chance to walk into and absorb the vibe of that room,

and I was joined by Gilmour's longtime guitar tech and the band's musical instrument supervisor Phil Taylor, who mapped out for me where Gilmour, Wright, and Mason each set up when they recorded here together.

Standing next to an empty guitar stand and lone amp in the corner as Taylor described the player's positions, I was instantly struck by how freakin' *small* this room is, and how tight it must have been with all three musicians and their respective gear loaded into it for recording.

Additionally clear while moving around in it is the room's unique aura, which lends itself to artists capturing such great moments. "For one thing, it's extraordinary, because it's so small," Mason says. "It's tiny. You're hard-pressed to think it would be a good place to play. But it's also the ambience of the whole boat—like the fact that you've got the swans passing by outside. It's such a cool place to work."

Is there a particular sound Mason feels the band got in there that they (first the three of them, then later just Gilmour and Mason) couldn't get elsewhere, especially considering the overall tight proximity? "It's less the sound as much as the way 'getting' the music works," Mason explains. "You're *very* attuned to listening to what other people are doing. The fact that you've got eye contact is very different from working in, say, Abbey Road, where there's a drum booth. And," he laughs, "it's important to be that close as we get older and more short-sighted." Adds Jackson, "It's a great symbiosis that David and Nick have when they play together. Nick's just got that 'Nick thing,' which is brilliant—real simple, and it fits great in the arrangements. They enjoyed working together again, and Nick's enjoying playing again."

Not all of *River* was cut on and in *Astoria*—some of the older material was recorded years ago in Britannia Row Studio in Islington, some of the added material was cut in Gilmour's newer Medina Studio in Hove, as well as Olympic Studios in London—and Jackson had to be mindful of all of the aural differences as he began to track *River*'s respective stereo and surround mixes. But Gilmour had clear faith in Jackson to nail the overall character of the sound he wanted. "Once I got it together, he came in and got in my head, as it were. He trusts us [Jackson and Iddins] same as he does with James [Guthrie, Floyd's other main longtime producer], to do what's right. What happened with this album is quite interesting, as there were *huge* sessions in Pro Tools. And because we were a generation back in Pro Tools, we were

### ● David Gilmour and Nick Mason of Pink Floyd



Harry Borden

Andy Earl



● Pink Floyd in 1994.

constantly running out of voices [i.e., room for extra vocal tracks], and it was really hard.”

For *River*’s 5.1 mix, Jackson went down a few paths different from what he did with *The Division Bell*. (My review of that 5.1 *Bell* mix, which was nominated for a 2014 Best Surround Sound Album Grammy, appeared in the October 2014 issue, and you can also read Jackson’s comments to me about the mixing process in The S&V Interview blog on [soundandvision.com](http://soundandvision.com).) “It was a strange one to do in surround, really, because lots of the time I literally only had stereo sources because so

much of it was pulled off DATs,” he notes. “Sometimes, it was like, ‘Well, *that’s* all there is!’ So what do you do with it? In those cases, I was trying to find a way to *spread* those things to get into space corners, and things like that. Other times, I had discrete stuff where I could pan things around and put them in specific places—for example, the idea of using diagonals to

try and get ‘inside’ the space, as well as around the edge of the space. There’s a lot to play with. You go back to early stereo, and it was all really an extreme. People got more subtle about it and understood it better as time went on. We’re still in that phase with surround. It’s proportionately that much more complex, and there are lots of ways of thinking about it.”

While the content creation of *The Endless River* spans across two decades, it doesn’t sound dated in its combination of the right amount of Pink Floyd aural “touchstones” alongside newer elements. “I think that’s something we became very conscious of,” Jackson concedes. “When we

did *A Momentary Lapse of Reason* (1987), there was a production decision that largely came from [producer] Bob Ezrin: ‘We should make an album that’s very *now*.’ Now, of course, it sounds very *then*. Coming back to *Division Bell* and *River*, we said, ‘Let’s not do *that*. Let’s do *classic*.’ We deliberately made it sound timeless rather than ‘of a time.’”

## Is There Anybody Out There?

Will there ever be another new Pink Floyd album? Everyone involved in the Floyd camp doesn’t think so. Gilmour has gone on record saying *The Endless River* is the final band statement, and he’s currently back to completing his next solo project, which may come to light later in 2015. Clarifies Jackson, “*The Endless River* became an interruption in that process. David was already working on his solo record when *Endless River* came into existence, and he had to put it on hold for a while.”

Jackson would love to work on another new Floyd album, of course, but realizes he may never get the chance. “No, I don’t think so,” he sighs. “Shame. I’ve really, really enjoyed the process of making this record. It was inherently

## Signal to Noise Sings in 4.0

After putting forth a pair of masterful 5.1 surround sound mixes for the 20th anniversary edition of Pink Floyd’s *The Division Bell* and the brand-new release of *The Endless River*, one might think producer Andy Jackson would follow suit for his own first full-fledged progressive-leaning solo album—but you’d be dead wrong. Instead, the man’s mandate for the oh-so-appropriately named *Signal to Noise* (Esoteric Antenna) was strictly quad. “The concept of surround mixing is still developing, I think,” says Jackson. “It’s certainly still developing for me.” Here’s why he decided on four channels of *Noise* instead of six. —MM

**MM:** Tell me your reasoning behind going with 4.0 instead of 5.1 for *Signal to Noise*.

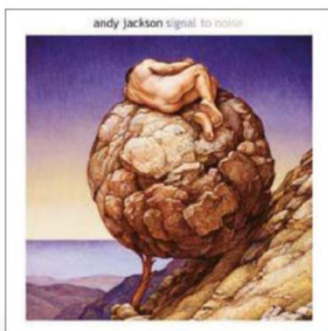
**AJ:** For anyone who does surround mixing, the issue really is: How do you use the center and the sub? They’re really more for the cinema format. We find ways to use the center and the sub because they’re *there*, you know?

The center certainly performs a role in the cinema because there’s dialogue and something happening on the screen when you’re not sitting in the middle in the theater. Anyone listening to music at home in surround is going to sit in the middle, so it’s going to be relevant. But if you put things like vocals in the middle, the tonality is different because it’s

coming out of a single speaker rather than the stereo pair, so you don’t get that combing in the midrange. It never sits in the same way.

So with my album, I thought, “Well, I’m not answerable to anyone. I can do as I please.” I’m going to nail my colors to the mast and just do straight quad. To be honest, there’s a degree of fun to it as well—as in, “Well, why not? Why not do that?” It’s quite funny to see outright quad on the master rather than surround! What a wonderful retro feel about it. You only live once, so have a bit of fun. And I did.

It works really well, and for me, it’s very, very compatible with the stereo mix. It felt like the stereo mix expanded, rather than be something that didn’t quite fit in the same place. To me, it was a successful experiment. But I don’t think I’d do it with anybody else’s record, because people might complain! (laughs)



**MM:** Well, there’s

nothing to complain about here, because I think you’re right. It’s very complementary to the stereo mix—though I have to admit I’m wholly partial to the quad. I feel like I’m in the middle of two fields working together—a front mix and a back mix that supplement rather than parallel each other.

**AJ:** Thanks. You know, when I did *Division Bell*, the way I was thinking about it was that if you could “take” the stereo field, you’d stretch it

around into a kind of horseshoe shape—the thinking being that it’s now like a horseshoe-shaped stereo. That’s how I was thinking about it at that time. But Al Schmitt, for example, he’d think of it as being a front stereo and a back stereo. That’s the way his records sound to me. And I know in speaking with James Guthrie [Floyd’s other main producer, who did the surround mixes for *The Dark Side of the Moon* and *Wish You Were Here*], he likes diverse-field stuff, where he’ll do things across diagonals, and other things he’s rather less discrete about.

**MM:** Did you do any work on this album on the Neve 88R console in the control room of the Astoria houseboat studio?

**AJ:** You know, I didn’t do anything on that console! *Signal to Noise* is an “in the box” album. It’s not mixed analog. It was mixed in Cubase in the computer, since it’s essentially a “home” album. My studio is literally in my house.

For the quad, I just picked up my computer and took it down to the boat, because it has a better monitoring system. I still mixed it in the box, though; I didn’t change anything. I’m learning more and more about what sounds good that way. Bizarrely, as I found out recently, they were using 4-track plugins, and I learned Cubase’s own equalizer is actually really good. (chuckles)

**MM:** Will you’ll do quad again for your next solo project, or...?

**AJ:** I’ll certainly do it in surround, but I don’t know if it’ll be 5.1. I reserve the right to be inconsistent. (laughs)



# Another Brick Atop The Wall

"I don't know why these songs all came out so long. I think we're going to have to blame Steven Wilson," laughs Dave Kilminster. The ace guitarist is discussing the impetus behind the extended track lengths on his self-described "prog-tastic" solo record, *...and THE TRUTH will set you free...* (Killer Guitar Records). Kilminster is known for his six-string pyrotechnics and prowess as an instructor, but you may also recognize him as being the featured lead guitarist in former Pink Floyd bassist/vocalist Roger Waters' touring band for the past decade. On *THE TRUTH*, Kilminster gets to spread his wings even further, as witnessed by the lengthy acoustic guitar intro to "Messiah" and the different movements and styles—including his intuitive interplay with a string quartet—on "Cassiopeia." Getting a live feel is key, believes Kilminster: "It's so cool to really get into the mood of a track," he says. "There's no sampling, there's no Auto-Tune—just a couple of guys recording together in a room, the way it's supposed to be."

Here, Kilminster, 53, and I discuss vintage sounds, live quad, and what it's like to contend with immense pillows of wind while soloing atop a massive wall. That'll keep you going through the show.—MM

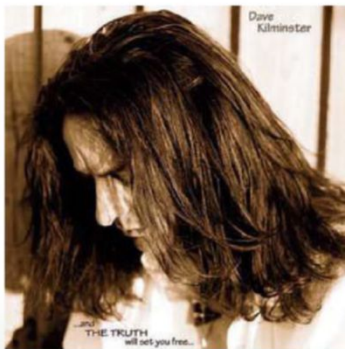
**MM:** What was your idea for the character of how you wanted this album to sound? I like the many, varied layers to each song.

**DK:** Thank you. I like the "old" sounds. I like analog. I like valve mics and old preamps. I just love the sound of '70s records, really.

**MM:** Roger Waters does live quad on all of his tours. Does that enter into what you have to

do onstage? Are you cognizant of how the set gets mixed?

**DK:** Unfortunately, we're probably the only people in the stadium who are completely unaware of it. Everyone's wearing in-ears, and we just get the click track. To be honest, you can have whatever you want in your ears, but I tend to keep everything very, very sparse. I feel envious of the people who came out to see *The Wall* tour. I got to hear some stuff during soundcheck, when I'd go out into the arena. It's just incredible. It's like you said about listening to Steven Wilson's *The Raven [That Refused to Sing (and other stories)]* in 5.1—once you experience that kind of sound, then anything else just doesn't sound right.



**MM:** Speaking of huge moments—one of the biggest ones during the entire show is when you're standing at the very top of the wall itself, doing the solo on "Comfortably Numb." How do you compose a solo for one of the most iconic songs in the Pink Floyd canon?

**DK:** I try to treat the music with the utmost

respect and make the fans happy. If I were a fan, what would I want to hear? I'd want to hear that solo played as close to the original as possible, with as much energy, passion, soul, and emotion that I can squeeze into it.

**MM:** And there's truly no hiding when you're up there. Did you ever worry about falling off the wall?

**DK:** Well, yes. (chuckles) There was no safety harness. I literally just stood on a platform that high in the air, which is kind of scary. It was very, very windy during the outdoor show we did in

San Francisco [May 11, 2012]—the wind was whipping up off the Bay, and it was actually moving the wall. I could feel the wall moving and hitting the platform that I was standing on, trying to deal with 50,000 people looking at me while I'm trying to play the solo properly.

**MM:** Wow, no pressure on you there, Dave. What was your personal highlight of the show?

**DK:** I tend to like that track, what is it... (sings) "dirty woman"...

**MM:** "Young Lust."

**DK:** Yeah. It's a little bit more funky, a little bit more syncopated. That's generally my taste. Obviously, "Comfortably Numb" is a highlight, but there's so much pressure on it that my very favorite part of the show was always the very last chord of that solo. (laughs) The lift would go down and I could go, "Ahhhh." And then I could enjoy the rest of the show.

**MM:** You've been able to play a good bit of the Pink Floyd catalog over the years, including all of *The Dark Side of the Moon*. What are your favorites?

**DK:** "Any Colour You Like" was always nice. It's slightly funky and messy, with all the chord progressions. And "Have a Cigar"—it's kind of got that funky thing as well. I would have loved to have sung that one, since it's right in my singing range. That's the one thing I missed on *The Wall* tour, because I sang quite a lot on the *Dark Side* tour. But Roger wanted to replicate the whole bunch of singers who were on *The Wall*, so we did that with full backing vocalists and Robbie [Wyckoff], who was doing David [Gilmour]'s vocal parts. (pauses) It's weird. It's kind of like you're living a dream on tours like these, really.

*A longer version of this interview appears in the S&V Interview blog on soundandvision.com.*

different than making any other record because I was dealing with pre-existing building blocks that took an enormous chunk of the process away that made it really fun to deal with."

All that being said, Mason would still like to get behind the kit and play live again under the Pink Floyd name if he could. "I'd love to," he confirms with a grin. "I've always said that. I've never wanted to finish it at all. I love playing live—going out and doing it, and playing with those guys. But if they don't want to do it, or David doesn't want to do it, then that's how it is. You can't make these things happen, and there's no point in doing it unless there's an enthusiasm. And it has to be driven by enthusiasm. I don't really enjoy working on my own. Drummers are sort of herd animals, really. They need other people to work with. Given the opportunity, I'm happy to play with almost anyone."

While new bands continue to struggle to enter the collective consciousness, Pink Floyd is cemented as one band most likely to serve as a rite of passage for generations of adventurous listeners to come. "I think for people who like music, we represent something—and it's something that's quirky," offers Mason. "You know, we are outside the mainstream. Other bands promote themselves, and primarily, they're showmen. Mick Jagger is the ultimate rock star, really. For some reason, we found a way of operating outside of that—and I don't even think it was deliberate. It required we do something else. It'll be my children's children's children who will look at it and say, 'Oh, my great-grandfather did that.'"

Mason is content if this album serves as the band's epitaph. "*The Endless River* is a reasonably graceful, gentle departure," he assesses. "I

tend to avoid trying to find our place in history and review ourselves. The old line is, 'The more I tell people how clever I am, the more stupid I feel.' I prefer the plaudits to come from the outside to tell us how great we are."

Being a noted car aficionado, if Mason could equate the experience of making *The Endless River* to getting behind the wheel of his favorite vehicle, what car would it be? He doesn't hesitate: "Oh, a Ferrari 250 GTO, I think." And that makes total sense, as the Italian sports car manufactured in 1962-64 is a legendary racing machine on welcome par with the impact of Pink Floyd's music—music that will continue to shine on louder than words and the sum of our parts, long after we've all stopped swimming in the fish bowl and running over the same old ground, year after year. ♦

# WiSA Wonder

By Daniel Kumin

## Sharp SD-WH1000U Wireless Universal Player

**PRICE \$5,000**

**TRUNDLE DOWN** TO YOUR LOCAL big-box store, and you will find quite literally dozens of Blu-ray Disc players on offer, starting well under \$50. Big ones, little ones, skinny ones, flat ones, cheap ones, and cheaper ones.

None of these will be Sharp's new SD-WH1000U, a Blu-ray player with a difference. Two differences, in fact: First, it has a jaw-slackening price tag of \$5,000; second, Sharp's design is wireless-centric, being the first WiSA-compatible player to appear, and one of the very first WiSA sources of any description.

As such, the SD-WH1000U is not merely a player. It's meant to serve as a WiSA hub, the control center of a high-performance wireless system of up to 7.1 channels.

WiSA, while it may sound like something Jar Jar Binks would use to begin a sentence, stands for Wireless Speaker & Audio. The WiSA Association is a trade group promoting a unified, 7.1-channel wireless-speaker standard that proclaims high-res audio transparency as well as "interoperability," meaning you can mix 'n' match source and speaker brands and models with impunity. (In fairness, WiSA is on record as preferring the pronunciation "why-suh.")

### Setup

I set up the Sharp with a quintet of Bang & Olufsen WiSA loudspeakers we had on hand (pairs of BeoLab 17 and 18, plus a BeoLab 19 sub—vestiges of last issue's review of the Avant 55 television system), eventually adding for a time my own center-channel speaker via one of two VR-WR100U "wireless bridge"

### AT A GLANCE

#### + Plus

- State-of-the-art wireless (WiSA) audio performance
- Includes full WiHD Wireless-HDMI link
- Substantial, very high-quality design
- High-res audio compatible—wirelessly

#### — Minus

- File-streaming feature not fully baked
- No mixed wired/wireless multichannel output
- No video processing on HDMI inputs
- Limited system control features

components Sharp thoughtfully included for our use. This Bible-sized, monaural component adds \$999 *per wireless channel* to the cost of a setup that requires one or more non-WiSA speakers.

The SD-WH1000U also includes a WiHD wireless-HD-video transmitter that screws onto its rear panel, making HDMI and power connections in so doing. Even better, Sharp packs a WiHD receiver with each player, completing the connection at no extra charge. (WiHD—Wireless HD—is a standard for HDMI-like video transmission operating in the 60-gigahertz radio band.)

The actual setup of this wireless mixed marriage proved unexpectedly easy. Easy, that is, once I decoded the meaning of the Bang & Olufsen loudspeaker manuals (which are printed almost entirely in Scandinavian picto-glyphs rather than old-fashioned language). Notably, there is currently no ability with the SD-WH1000U to mix wired and

wireless channels in a single system.

The menu allows you to select all wireless (up to 7.1 channels) or all wired channels (using the unit's two-channel analog output, 5.1-channel digital coax/optical outputs, or 7.1-channel HDMI output). But you cannot, for example, run a wired front for left/right along with wireless surrounds. When one option is selected, the other is muted. Along with preventing easier retrofitting of the player to an existing multichannel system, this means that users with high-end stereo speakers up front who wish to retain a wired connection for two-channel audiophile playback would be required to take a trip through the menus to change over, and then back, each time. Sharp says they are considering a firmware update to allow simultaneous wired and wireless output.

With each speaker of my WiSA suite jacked to an AC outlet (wireless, my foot!), the SD-WH1000U powered on to a text onscreen menu. After I navigated to its WiSA settings page, "Manual Search" induced a wireless-discovery pause of a minute or two, after which the Sharp displayed an onscreen list of my five wireless items, each represented by a hexadecimal MAC address (02:ea:3d:00:1f:17, for example). Unfortunately, the player has no way of knowing which address is in which position; you have to assign them manually (via an onscreen rotation), and since you don't necessarily know

### RATING

Sharp SD-WH1000U Wireless Universal Player

Audio Performance ★★★★★

Video Performance ★★★★★

Features ★★★★★

Ergonomics ★★★★★

Value ★★★★★

which speaker carries which address, an amusing game of trial and error ensues, or did at least in my case. Sharp told us later that, theoretically, all WiSA-compliant products should have their MAC address printed on a label somewhere on their outside skin.

The next screen has a simple graphic for circulating noise, with steps to adjust the familiar distance, level, and size options for each channel. Further up the menu structure are pages for video settings (the Sharp can scale to 4K if your display is so endowed), prioritizing SACD layers and DVD/Blu-ray secondary audio, and the usual disc-player options.

Around back, the SD-WH1000U provides stereo analog audio outputs in both balanced (XLR) and unbalanced (RCA) formats, coax and optical S/PDIF digital outs, 3-in/2-out HDMI, a USB port (plus another on the front), and a wired-Ethernet port (there's also built-in Wi-Fi). Finally, the supplied, screw-on-rear-panel-bump adapter mentioned earlier empowers the Sharp to beam uncompressed WiHD wireless-HD video to your screen, though only up to 1080p resolution (of course, the display would either need a built-in WiHD receiver, or require use of the included add-on receiver).

### Performance

There's more, of course, but what we are interested in here, at least in the first place, is the Sharp's wireless abilities. These, I am happy to report, proved entirely first rate. In nearly a month of listening—both casual and "auditory," stereo and multichannel alike—via my suite of 4.1-channel B&O WiSA speakers, I did not experience so much as a



● The SD-WH1000U is one of the first WiSA sources.



## THE VERDICT

The SD-WH1000U is beautifully built and an outstanding A/V performer wired or wireless, but it's not quite up to service as a full-system hub controller.

single solitary glitch, dropout, noise or distortion artifact, or any other audible deformation. Nor did I note any obvious loss of sound quality.

I did a good deal of intensive listening to stereo DSD files, from USB thumb drives jacked into the player's front-panel port. I listened via the unfamiliar B&Os (though the BeoLab 18 is a very interesting loudspeaker design; see our full review, February/March and online at soundandvision.com) and also via my everyday power amp and Energy Veritas monitors, thanks to the pair of "wireless bridge" components Sharp included, alternating with my usual hookup via the player's own conventional RCA outputs.

My conclusion is pretty firm: Via my own amplifier and loudspeakers, the Sharp's WiSA connection, which sends files as uncompressed 96/24 digital audio, sounded the same as the unit did when connected via physical cables. Due to the impossibility of making direct, short-delay, same-speakers comparisons, I'm not quite yet prepared to stake my life on the question, but short of that, I'm pretty confident in characterizing the SD-WH1000U as wirelessly transparent on both CD-format and high-res audio playback.

On the Blu-ray/DVD video side, the Sharp also passed every test I had available to me. My usual rotation of video checks via patterns and clips from a handful of test discs indicated that the SD-WH1000U's video processor is also top flight. I saw no visible artifacts of deinterlacing, scaling, or format-converting, and the Sharp's Blu-ray image was never less than pristine. (Check our Test Bench results for the official word.)

## Ergonomics

Ease-of-use results were considerably more mixed. While playing discs, the Sharp was quick and responsive—this clearly is an excellent, up-to-date Blu-ray player design—but its utility with other sources was uneven. Unlike how the typical A/V receiver behaves, Sharp spec'd the SD-WH1000U to pass the HDMI input from any outside source with no video processing. So incoming video is not scaled and can't be tweaked in any way. The Settings menu does include a Video/HDMI setup submenu that offers the usual choice of resolution selections, but it only affects disc playback and the unit's onscreen menus.

Next, the Sharp's streaming-media feature did not work usably in my system, where my desktop iMac serves up DLNA content via TwonkyMedia, a popular, cheapware OSX software server. The SD-WH1000U would play files residing in a folder on my hard disk's root level, but not any deeper in the file structure, though it did play those root-level DSD and other high-res files without issue.

Files on USB media plugged directly into the player, however, played fine, with full resolution and satisfyingly high-end sound. What's more, the Sharp had no problem navigating plug-in USB media to at least five folders deep. Whether the DLNA problem was wholly the Sharp's or not I cannot say, other than to observe that my iMac/DLNA-server setup has worked smoothly with at least a score of other DLNA clients in A/V receivers, set-top boxes, and other components.

I encountered a few other oddities with the SD-WH1000U. If you're

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watching a disc and pause to switch to an external source attached via HDMI input to watch, say, the weather report (or even if you just switch to the Home menu to adjust a setting), returning to the disc takes an agonizing 20 seconds, and the player forces you back to the main menu, where you must restart from the top or select a chapter. (The traditional resume function, in which you press Stop once and then press Play to return to the last point of viewing, works as long as you don't change inputs or press Stop a second time.)

Sharp's brochure specs the SD-WH1000U as "Roku-Stick-ready," presumably via its one MHL-compliant HDMI input, which is nice. But there are no Internet streaming services on board, which is all but unique among even the cheapest of today's Blu-ray players. The Sharp's onboard Wi-Fi found my home network without fuss and worked reliably if (not surprisingly) a bit more slowly than wired Ethernet in terms of track/folder access. As already mentioned, media streaming from my network was unusably spotty either way.

Sharp's materials mention MP4/AAC file compatibility, but at first the SD-WH1000U would neither recognize nor play MP4/AAC files on any medium. Eventually, a careful read through the manual revealed a tiny notice suggesting that one should attempt a firmware update if the unit fails to play MP4/AAC files, which I did, with positive result. Presumably, new buyers won't have to jump through the same hoop.

In other news: On occasion when I recommenced playback from a pause, the left-front speaker—after reawakening with no delay and playing for 5 or 10 seconds—would mute for about 2 seconds (and the B&O's LED would flash red, indicating

a switch to standby) but then return without further ado. Whether the fault here lies with Sharp or with B&O, I have no way to tell.

Sharp's materials highlight a Sharp Mobile App for both iOS and Android devices, but I had no luck discovering such an app on the Apple iTunes store or elsewhere, and so I could not try it. Sharp told us later that it's available in both the iOS and Android app stores as "Sharp AudioCentral." Meanwhile, I found the remote's slim, black, non-backlit design nicely usable and logically arranged.

The remote includes a pair of up/down Sound Mode keys, which, when operated, advanced through Direct, Standard, and Mode 1-3 according to the onscreen display. However, since there was no sonic change (nor interruption) whatsoever, this did not appear to do anything. The manual was not helpful in describing what each mode would do or under what conditions this control might be active, and as best as I could determine, the SD-WH1000U played back the surround mode and format selected by the source, whether disc or HDMI.

## The Bottom Line

Let me step back for a moment and reiterate that I have no qualms about the Sharp player's potential as a genuinely high-res audio component. Sharp notes several high-end *bona fides* for the SD-WH1000U, including 96/24 resampling and conversion, playback of high-res files up to a 192-kilohertz sampling rate, ESS9018 D/A hardware (a chip widely endorsed in esoteric circles), and some serious power-supply and analog-audio circuitry. And everything I heard tended to confirm the claims: Reference-grade recordings, in particular the dozen or so DSD files I intensively auditioned



## TEST REPORT

# Test Bench

## Sharp SD-WH1000U Wireless Universal Player

**VIDEO** The Sharp's video performance was tested from the player (rather than through the included WiHD wireless transmitter/receiver). The player failed the 2:2 HD test with some visible moiré, but this failure is common in many of the devices we test and should not be an issue with most program material. Its performance on the other tests was exemplary and among the best we've seen.—TJN

## SPECS

**Dimensions (WxHxD, Inches):** 17.13 x 4.25 x 14 • **Weight (Pounds):** 27.6 • **Video Outputs:** HDMI (2, 1 ARC/4K), WiHD wireless • **Video Inputs:** HDMI (3, HDMI 1.4a, 1 MHL), USB (2, 1 front panel), Ethernet (1), onboard Wi-Fi, IR remote • **Video Processing:** 4K/1080p scaling (disc playback only) • **Audio Outputs:** WiSA wireless 7.1-channel; stereo-analog (bal./XLR; unbal./RCA), S/PDIF digital optical (1), coaxial (1) • **Audio Inputs:** S/PDIF digital optical (1), coaxial (1) • **Additional:** RS-232 (1) • **Streaming:** DLNA/UPnP via wired-Ethernet, Wi-Fi

experienced any sync or video issues other than the rare channel-mute already mentioned.

Fine A/V performance or not, though, as a wireless "WiSA Hub" meant to fill the role that an A/V receiver or pre/pro would take in a modest, conventionally wired system, the SD-WH1000U was simply not ready for prime time. Its superb wireless sonics and Blu-ray performance were not quite enough, in my

● Daniel enjoyed the remote's layout and usability.



view, to counterbalance what proved to be unusable music streaming from my network, limited everyday-use features, several operational roadblocks, and exalted price. Nonetheless, the SD-WH1000U is a first of its kind, and there are bound to be some bumps along the wireless way. Along with a few firmware updates, perhaps, to smooth some of them out. I'll be keeping a "sharp" eye on the WiSA space; you should too. ♦

from USB media, sounded terrific, wireless or not.

Consequently, WiSA, at least as evidenced by the Sharp/B&O setup I experienced, seems fully ready for serious listening. I watched a handful of movies—and auditioned such discs as the Dolby Atmos demo disc (in non-Atmos Dolby TrueHD, of course), a superb-sounding Blu-ray Disc—and never heard anything short of truly fine sound, nor



| 3:2 HD | 2:2 HD | MA HD | 3:2 SD | 2:2 SD | MA SD | VIDEO CLIPPING | LUMA RESOLUTION | CHROMA RESOLUTION |
|--------|--------|-------|--------|--------|-------|----------------|-----------------|-------------------|
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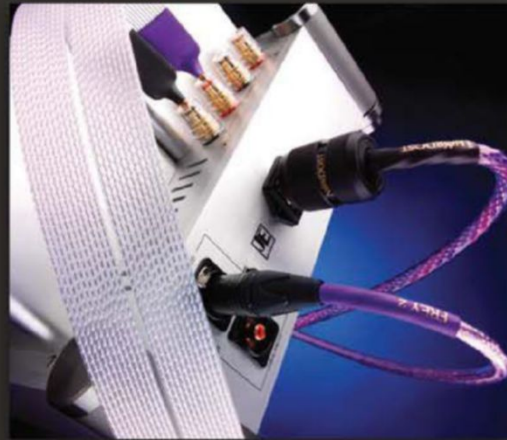
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By Daniel Kumin

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**PRICE \$1,000**

### GOOD-SOUNDING SMALL

speakers no longer impress me. After all, these days, pretty much anybody with a laptop and an Internet connection can design a small two-way that's reasonably neutral. The tools are all online (many of them share/freeware), fine-performing drivers ranging from cheap 'n' cheerful to exotic 'n' expensive are readily available with complete Thiele-Small parameters, and MDF and veneer are plentiful down at Lowe's. You don't even need to know Ohm's law; fluency in Windows or OSX and some basic woodworking skills are probably more useful.

But a small two-way that's great-sounding, neutral, and *reedonkulously* cheap? That's another story.

I was already plenty familiar with SVS, the heartland-based direct-to-consumer speaker house that got its start in subwoofers. Hell, my own studio's long-term sub is an SVS PC12Plus tube (wicked big, wicked fugly, wicked low and loud), and I raved about the company's maiden full-range designs, the Ultra series, when they bowed a couple of years back. So SVS's new Prime series has been a subject of considerable anticipation, especially given the interval between the two debuts.

The Primes consist of four models: a multi-way tower, larger bookshelf and smaller satellite two-ways, and a center-channel speaker that's surprisingly affordable (\$350) for a three-way design. Populist value-hound that I am, I requested the lineup's cheapest option: a quintet of the smaller monitors, the SVS Prime

### AT A GLANCE

**+** Plus

- Honest, accurate, full-range sound
- Painless sub/sat blending
- Cheap!

**-** Minus

- Won't match ultimate volume level of larger, more costly systems

Satellite, supported by a pre-existing subwoofer model, the 12-inch, 300-watt SB-1000. SVS packages all this together as the Prime Satellite 5.1 system, for \$1,000 (well, \$999 and 99 cents). With free shipping. And a 45-day (equally free-shipped) return privilege.

The compact Prime Satellite itself is about the size of a half-gallon milk carton, incorporating an impressively high-quality-looking 1-inch aluminum-dome tweeter and a "4.5-inch" woofer—which is what we used to call a 4-inch driver, back when we measured surround diameter, not screw-to-screw mounting-flange dimensions. Sigh. A poke around inside the rear-ported cabinet revealed some surprisingly hefty crossover components and solid enclosure construction, which is nicely finished in gloss black. (Black ash vinyl is the other option.)

The Prime Satellites are equipped with keyhole mounts for wall-hanging, but since the speakers are rear-ported and the keyholes step out less than

a half-inch, I can't really recommend wall-mounting short of using an extended bracket that holds the speakers further out. They're also furnished with solid multi-way binding-post inputs, whereas some speakers in this range make do with spring terminals. I mounted the left/right Prime Sats on my usual stands, flanking my 52-inch Samsung TV but behind the outer edges of my acoustically transparent Seymour Screen Excellence screen, when deployed. The center Satellite went (in its normal, vertical position, of course) on a low stand just below the glass screen's bottom edge, and the surrounds were on high shelves flanking my listening spot; as usual with direct-radiating surrounds, I angled them well back to splash some sound along the walls for a more diffuse ambient presentation, my strong preference for film sound.

The SB-1000, mercifully light for a 12-incher (27 pounds), went in my established subwoofer location to the right of the right-front speaker. The sub includes a rather complete set of facilities: In addition to line-level

inputs and outputs, there are controls for crossover frequency, level, and continuously variable phase; there are even speaker-level inputs on full-sized multi-way posts—pretty rich for a \$600 12-inch subwoofer (or \$500 in black ash). (SVS also offers a ported equivalent, the PB-1000, in a larger cabinet for \$500.)

### Pint-Sized Fun

Balancing up the assemblage was gratifyingly quick and easy. SVS rates the Prime Satellites for a -3-decibel point of 69 hertz, so I set my preamp/processor's crossovers to 80 Hz all around, balanced things up by meter with fine-tuning by ear, and proceeded to auditioning.

I began as always with the left- and right-front speakers alone, running full-range via the pre/pro's Direct listening mode. What I heard was a very honest-sounding tonal balance with even, essentially unexaggerated treble and modest bass. This substantially refrained from the "woofy" character that can arise from a slight overexuberance of woofer output, a common gambit among designers of ultra-compact speakers in order to deliver an impression of deeper bass. Instead, the little SVS kept a well-equilibrated balance, at the price of a decided



● Each Prime Satellite houses a 4.5-inch woofer and a 1-inch tweeter.



## THE VERDICT

If your criterion is un-hyped reproduction, SVS's Prime Satellite 5.1 system is as good as it gets for \$1,000.

lack of authority in the sub-100-Hz regions. That said, the Satellites' vocal openness and what I judged to be a notable absence of mid-octaves colorations made me eager to compare the SVS models to my everyday speakers, three-way Energy Veritas stand monitors that, if not long discontinued, would surely cost eight times or more the Sats' absurdly modest price. (For the record, I feel that reviewers who abjure level-matched comparisons run a serious risk of missing key characteristics of any speaker's performance.)

Both in overall tonal balance and in vocal-coloration details, the dinky Satellites matched my everyday Energys (which are about six times their volumetric size) amazingly closely. Sure, the Veritas speakers had more top-octave "air" and reproduced well a solid octave or so lower, but otherwise the similarities were overwhelmingly greater than the differences. Deployed alone, the little Prime Satellites would make for very listenable, cozy-room loudspeakers; there's just

enough sub-100-Hz output to deliver musical sense on most programming.

Of course, the pint-sized Satellites couldn't compete on deep stuff, like the 35-Hz synth-bass of Feist's dub-music-hall trifle "Tout Doucement" (*Let It Die*), so I switched to my preamp's Stereo mode to bring the SB-1000 sub into play. This was now a fair fight, and the Satellites very nearly matched the heavyweights on the detail and delicacy of the *Canadienne*'s carefully nuanced vocal breathiness, while the 2.1-channel configuration clearly bettered them in deep-bass extension. And, unusually for such small speakers, sub/sat blending was fine from the get-go. Interestingly, when I experimented with even slightly higher or lower crossover settings, it seemed pretty clear that 80 Hz was the sweet spot; a 10-Hz drop to 70 Hz opened a just-perceptible lightness in the midbass, while 90 Hz brought about an equivalently subtle thickening. Though of course

every room and setup location will deliver different results.

### Nearly Perfect

Good as the Prime Satellites were, I still made a few notations on my pad, items I cannot in good conscience brand as flaws in a \$135 loudspeaker, but that due diligence demands I mention. There seemed to be a response emphasis somewhere in the upper octaves that made certain sounds, like a few ride cymbals and massed strings (and occasional vocal tones), project a bit more forward than others, but this was almost too mild to call out at all. The SVS satellites' uppermost octaves sounded otherwise quite smooth and balanced, but they lacked that last bit of air and finesse on elements such as brushed cymbals or sharp transients like finger-snaps, which reproduced just a shade less openly or incisively than via my long-term monitors. And while the Satellites imaged very sharply and solidly indeed, left to right, they seemed to

throw what depth they could muster mostly forward, without much illusion of stage depth or height.

Back in the positives column, useful volume via my 150-watts-per-channel main power amp was impressive, with plenty of clean level for convincingly realistic playback on natural-acoustic recordings like jazz or chamber music, but just a couple of decibels short of the same for big-orchestra (or, of course, rock-concert) equivalents; let's remember, however, that this was in a fairly large, fairly dead room. Most smaller-than-small (and cheaper-than-cheap) speakers tend to get harsh in the treble when pushed hard, but the SVS Satellites remained intact up top. Instead, they eventually warned of incipient too-loudness by developing just a hint of impending "thwack" on big midbass transients. In my room, this volume required power output fairly close to my amp's upper reaches, making SVS's listed recommended power range of 20 to 150 watts more plausible than is sometimes the case with small speakers.

This shortcoming—if shortcoming it was—was largely eradicated when playing multichannel music. Cueing up the Band's *Music from Big Pink* on SACD enabled clean, dynamic listening that remained unstrained even at console-chair levels. The SVS layout had plenty of

## SPEAKER SYSTEM

### SVS PRIME SATELLITE 5.1 SPEAKER SYSTEM

PRICE: \$1,000

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## TEST REPORT

- The 12-inch SB-1000 weighs a manageable 27 pounds.



## RATING

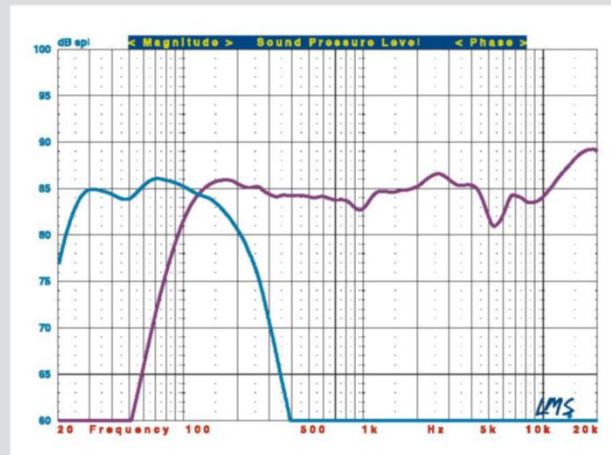
**SVS SB-1000 Subwoofer**  
 Performance ★★★★★  
 Features ★★★★★  
 Ergonomics ★★★★★  
 Value ★★★★★



See [soundandvisionmag.com](http://soundandvisionmag.com)  
 for full lab results and technical definitions

## Test Bench

### SVS Prime Satellite 5.1 Speaker System



**PRIME SATELLITE (purple):** +2.44/-3.23 dB, 200 Hz to 10 kHz; -3 dB @ 98 Hz, -6 dB @ 86 Hz; impedance minimum 4.56 ohms @ 302 Hz, phase angle +37.89° @ 1.1 kHz; sensitivity 84 dB, 500 Hz to 2 kHz.

**SB-1000 (blue):** Close-miked response, normalized to level @ 80 Hz: lower -3 dB @ 23 Hz, -6 dB @ 21 Hz, upper -3 dB @ 162 Hz with Low Pass Filter control set to maximum.—MJP

## SPECS

**Prime Satellite:** 4.5 in polypropylene cone woofer; 1 in aluminum-dome tweeter; 8.75 x 4.9 x 5.5 in (WxHxD); 6.5 lb • **SB-1000:** 12 in cone woofer; 300-watt Class D amplifier; 13 x 13 x 13 in (WxHxD); 27 lb.; RCA stereo line input, RCA stereo 80Hz 2nd order high pass line output, multi-way speaker-level input, continuously variable Volume, Phase, Low-Pass Filter controls; power switch



nearly three weeks of everyday viewing/listening, covering everything from TV news to NFL games to Blu-ray movies, and I never once felt shortchanged. Having three identical speakers across the front obviously makes for a tonally solid front stage, and it remains my ideal; there was less tonal shifting well off axis from the Prime Sat center than from any horizontal center, including many three-ways. In the surround positions, the Prime Satellites, like most other small two-ways, worked very adequately. The system as a whole proved capable out of all proportion to either size or price. Opie's *Apollo 13* may be 20 years old, but the late-edition Blu-ray remains a stern test of home-theater sound (and picture!), one that the SVS suite passed with honors. Despite its space-opera genre, this is a

resolution to display all the album's homespun virtues and warts alike: the cheesy reverb and dire EQ on most of the piano tracks, the mud-bucket bass sound, and the highly variable and heavily EQ'd vocal tracks—except for Richard Manuel's on "Lonesome Suzie." (Ah, the Band. They're all dead now, except for Robbie and Garth. Damn, I feel old.) This one track's vocal leaped out of the speakers with unsullied, audiophile-rich, Neumann U-87 immediacy. (I'm guessing about the mic, of course.)

Some say that musical acumen doesn't always translate fully to movie-sound excellence, but I figure accurate's accurate, and the SVS Prime Satellite setup, at least, tended to confirm my belief. I kept the SVS suite as my main listening source for

fairly talky movie, and the Satellites showed fine dialogue intelligibility and naturalness, even in the chaotic, many-voices Mission Control shouting scenes. And of course, the blast-off (and re-entry) sequences are all-channels, high-level, broad-band wring-outs; here the SD-1000 sub showed off level and deep-bass abilities that are surely difficult to equal at this price. SVS's cheapest sub goes plenty loud (within about 8 dB of my PC-12Plus, which dwarfs it in both size and price) and plenty low, with solid, genuine output well below 30 Hz and without any real excesses in the sensitive 60-to-100-Hz octave.

## Conclusion

So, putting all the pieces together, what we have here is a kilobuck 5.1

speaker system that reproduces the full audio range with real authority, does so with the kind of tonal balance and musicality you might expect from a bookshelf pair at this price, and (given reasonable power)

will play loud enough to satisfy most listeners, even in a good-sized room. That may sound like a pretty basic recipe, but trust me: At this price, it's a genuine achievement. ♦



**I never felt shortchanged.**





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# The Remotest with the Controlliest

By Darryl Wilkinson

## Logitech Harmony Ultimate Home Universal Remote Control/Automation System

**PRICE \$350**

IT WAS JANUARY OF 2013, AND Logitech, in an effort to “refocus its strategic direction,” announced it would divest itself (by end of the year) of several non-core product categories—among them speaker docks, digital video security cameras, and, notably, its Harmony activity-based universal remote controls. Unfortunately, by that time, short of the fancy installer-only control systems from the likes of URC, Control4, and others, Harmony had pretty much eliminated the competition for remote controls selling for more than \$50. So a dim, non-Harmonious future looked imminent for do-it-yourself home theater enthusiasts wanting more than the standard, three-in-one, el-cheapo universal hanging on a peg at Walgreens.

At the same time, smartphone app-based DIY home automation was working hard to become “the next big thing”—or at least the next big part of the Internet of things. Yet, the extent of the automation these systems offered always stopped at the door to the home theater. A few of the new DIY hub-based home automation systems—notably, Revolv (now defunct after being sucked into Google last fall) and SmartThings (snapped up by Samsung)—provided limited integration with Sonos multiroom audio components, but they offered zilch when it came to controlling

### AT A GLANCE



- **Color touchscreen with vibration and gesture support**
- **Emits IR from remote, hub, or blasters**
- **Integrates with multiple home automation hubs**



- **Inconsistent performance with SmartThings Hub**
- **No remote control locator feature**
- **Limited external IR emitter outputs**

AVRs, HDTVs, and source devices in a theater setup. As if the soundbar hadn't kicked home theater in the crotch hard enough already, now home automation was adding extra insult to the injury by ignoring A/V systems altogether.

### Rossum's Universal Remotes

Through some sort of *deus ex machina* of the home theater gods, though, Logitech not only held onto the Harmony division, it doubled down on development and recently released multiple new Harmony models. More importantly, some of these new remotes include a level of home automation, finally creating one controller that can be used to handle all the A/V gear in the living room along with all the smart

devices spread throughout the rest of the house.

Some might call it surprising that it's taken so long for Logitech to get this deeply involved in home automation. Almost a decade ago, the company included basic Z-Wave-based lighting control in the Harmony 890. I liked the Harmony 890 Advanced and used one in my system for many years—albeit, I'll admit, without utilizing the lighting-control capabilities. That's because, as great as it was for home theater, with respect to DIY home automation, the Harmony 890 was simply too far ahead of its time, with too few smart devices to control. Today, however, it's a different story, with many smart lights, locks, and other devices readily available and affordable.

Logitech's new \$350 Harmony Ultimate Home is a bit like the old 890 in that it's Harmony's top-of-the-line universal remote control that's also on the cutting edge of current home automation technology. The question is whether Logitech has blended the two control technologies in a way that's intuitive and convenient to use, or wound up with a kludgy, Rube-Goldbergian nightmare of a user interface? And then there's that other

question: Is the DIY world really ready to mix A/V control and home automation in one wand or app, with all the setup and programming that entails, or is this still too soon?

### Remote Possibilities

First and foremost, the Harmony Ultimate Home is a universal A/V remote control that uses IR, Bluetooth, or IP (Internet Protocol) to control up to 15 “home entertainment devices.” It consists of two separate parts: 1) a handheld remote with a stellar ergonomic design and 2.4-inch color touchscreen (and a recharging cradle); and 2) the Harmony Home Hub. The free Harmony App—with iOS and Android versions for phones and tablets—does everything the handheld remote can do plus a little more, including initial setup of the remote and truly “remote” control of your A/V components (and smart devices) from anywhere in the world as long as you have access to the Internet.

Although the handheld remote gets all the attention, the small Harmony Home Hub is the system's command center, where all the magic happens. It includes built-in Wi-Fi and Bluetooth connectivity but does not have an Ethernet port. As a result, if you want reliable, responsive performance, especially when it comes to a lot of the home automation integration, you need a robust Wi-Fi network in your home.



● The Harmony Ultimate system comprises the remote wand (right) and Harmony Home Hub (left).





## RATING

**Logitech Harmony Ultimate Home Universal Remote Control**  
**Performance** ★★★★★  
**Features** ★★★★★  
**Value** ★★★★★

## THE VERDICT

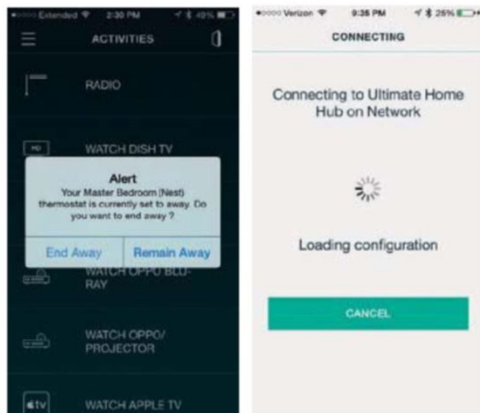
**The aptly named Harmony Ultimate Home** is the ultimate home and A/V controller you can buy, program, and use without the help of a professional integrator.

## REMOTE CONTROL

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### Home Is Where the Hub Is

The Harmony Home Hub has a built-in IR blaster but includes only two output jacks for external IR emitters—a disappointment

*of just two IR outputs, but the issue has usually been remedied on past systems with extra work during setup to splice in additional IR emitters in parallel on each of the two circuits.—RSJ*

The Ultimate Home remote



considering that the system is designed to control as many as 15 A/V components. The handheld remote has a built-in IR emitter, and there's a lot of programming flexibility as to which emitters/blasters send commands to what devices. Because I have a wall-mounted TV and drop-down screen in the front of my room, a projector hanging in the center, and two racks of gear in the back, it took me a while to find the right combination

and positioning of blasters, emitters, remote, and hub to consistently reach every component. Once I did, though, I rarely ever had to use the built-in automated Help troubleshooter or the manual Fix It Myself functions to rectify any power or incorrect input problems. *[Editor's Note: Installers experienced with prior Harmony RF receivers have always*

automation devices.

### The Court Gestures

It's no exaggeration to say that the amount of configuration and customization that can be done to the Harmony Ultimate Home is astoundingly mind-boggling. Or maybe it's mind-bogglingly astounding. Either way, you could start customizing this remote while your daughter is in day care and still be finding new ways to configure it long after she's graduated from high school and moved away to go to college.

To wit: You can program the Ultimate Home with an almost unlimited number of "Activities," which is the name Harmony uses for macros—programmed strings of commands for turning power on/off, changing sources, changing channels, setting volume, turning on/off lights, etc. Harmony's Activities are unique in that the remote remembers the status of each device used in a currently running Activity. So, if everything is properly running, it won't inadvertently turn the TV off when you switch from, say, watching TV to watching a Blu-ray. (Likewise with much of the home automation, such as lighting control.) This isn't as good as a system that's able to actively monitor the power status of a device directly or control a component using IP or RS-232, but \$350 is significantly less than you'd pay for that kind of control.

There's also the option of using the touchscreen as a touchpad with gesture control capabilities, such as swiping up or down with one or two fingers. There is a total of 22 gesture actions available—11 using one finger plus another 11 using two fingers—and any or all can be customized. Gesture actions are unique to each Activity, so two fingers sliding sideways might change channels when watching TV but might fast-forward when watching a BD movie. If you're starting to be overwhelmed by all of the Harmony Ultimate Home's potential customizations, sit down: You can also program unique gesture actions for each mobile app, so your



smartphone might work one way while your significant other's phone works in a totally different way. You don't need to do the math to know that's an astounding number of possible configurations.

You can also reprogram any physical button on the remote to do something other than its labeled function. You can enable/disable the tactile vibration that buzzes whenever the touchscreen registers a button press, and do the same for the tilt sensor that wakes the remote when it's picked up. The tilt sensor, by the way, can be used to tell a connected Nest thermostat not to go into "Auto Away" mode because someone is still at home.

### Revolv in Pieces

As anyone who bought a (now nearly useless) Revolv Hub will tell you, sometimes being on the cutting edge can be painful. In this case, though, I think Logitech made the smart decision to design the Harmony Ultimate Home to be compatible with a variety of prominent third-party automation hubs and communication protocols rather than develop its own proprietary automation system from scratch and compete with the ever-growing menagerie of other systems on the market. Some of the most prominent systems and devices the Ultimate



● **A large 2.4-inch color touchscreen graces the Harmony's top half.**

● **The Ultimate Home wand has a pleasing shape and offers tactile feedback.**

## TEST REPORT

### ● The free Harmony App has iOS and Android versions.

Home is compatible with include Nest and Honeywell Wi-Fi thermostats, plus automation hubs from Philips Hue, Lutron Caséta, PEQ, and SmartThings. (Belkin's WeMo is disappointingly not on the list.) The Ultimate Home even offers integration with IFTTT (If This Then That), the free online automation service. Sometime in early 2015, Logitech plans on releasing the Harmony Home Hub Extender (\$130), which will add direct control of many third-party ZigBee and Z-Wave devices and quite dramatically increase the capabilities of the Ultimate Home remote.

Of course, as you know, there's compatible and there's *compatible*. Systems designed to work well together on the drawing board don't always play nicely in the real world. Furthermore, marrying two or more user interfaces can often result in a multi-step nightmare that takes more effort than juggling the original remotes.

### Compatible Is as Compatible Does

For the most part, Harmony got it right. Turning on/off Philips Hue bulbs or managing a Nest thermostat is virtually as easy to do with the Ultimate Home remote (or the app) as it is with the Philips Hue or Nest app itself. Using the Harmony channel on IFTTT works incredibly well, too, although it's currently "limited" to triggering or ending an Activity.

My PEQ and Lutron Caséta samples haven't arrived yet, so I can't speak for the Ultimate Home's integration experience with either of them. But I have worked extensively with the SmartThings Hub, and I can tell you that—unlike with Nest, Philips Hue, or IFTTT—the SmartThings/Harmony marriage isn't as smooth as it should be. From what I can tell, SmartThings is the holdup because the Harmony integration is currently part of what SmartThings calls "SmartThings Labs." According to SmartThings, "Labs gives customers early access to a curated group of

popular third-party devices and services that can work together with SmartThings." But it's kind of a work-in-progress. "While we [SmartThings] work to polish the edges of the different products and solutions in our Labs, customers may experience a few performance issues (after all, it is called Labs)."

All things considered, the interface of the SmartThings system via the Ultimate Home apps or handheld remote was easy to use, with extensive capabilities. Because the SmartThings Hub uses the SmartThings cloud servers to process every command, the speed at which devices (such as door locks) operated was sometimes quite slow. Door locks, for instance, often took 10 seconds to lock or unlock after I pressed the Activity button on the Ultimate Home remote.

### To Touch or Not to Touch

Is the Harmony Ultimate Home universal remote control worth \$350? If you have more than four or five components or a more complex system that includes a few Sonos speakers, it's absolutely worth the money. Logitech also makes the Harmony Home Control, which does virtually everything the Harmony Ultimate Home does, but the handheld remote does not include a touchscreen. I'm a firm believer in touchscreens on remotes because it makes them so easy to use and, more importantly, provides information about your system and how to navigate it. Using a universal remote control without a

## SPECS

**System Requirements for Mobile Setup, for iOS:** iPhone 4S or later, iPad (3rd generation or later), iPad Mini, iPod touch (5th generation or later), device with iOS 6.0 or higher • **For Android:** Wi-Fi-enabled smartphone with Android 4.0 or later, Bluetooth Smart technology iOS or Android device • **For Online Setup, for Windows-Based PC:** Windows 8, Windows 7, or Windows Vista • **For Intel-Based Mac OS Computer:** Mac OS X 10.6 or higher • **Harmony App:** Download from Apple App Store or Google Play; Internet access, Wi-Fi, supports 802.11g/n, WPA Personal, WPA2-AES and 64/128-bit WEP encryption • **Includes:** Harmony Home Hub, IR mini-blasters (2), charging station for remote

touchscreen is a lot like driving in heavy fog. You can get where you want to go, but you can't see much more than a few feet of the road ahead of you.

The presence of the touchscreen becomes all the more important when you use the Ultimate Home as a home automation controller. With the touchscreen, for example, it's easy to change the color or output level of any Philips Hue bulb in your home. That's basically impossible to do with a plain, no-touchscreen-here remote. It's a similar situation with door locks and thermostats where you need feedback as to the current status of those smart devices.

You could point out that the Harmony Mobile App on a smartphone can take the place of the touchscreen on the remote, and that's true. But after several years of using my phone to operate various companies' A/V and home automation systems, I can tell you that relying solely on your phone for control is one giant pain in the ass—especially if there are multiple people who use the system. Sure, I almost always have my phone with me, but it's typically deep in a pants pocket. Then there's the delay while the app loads. Then there's more delay while the app checks with the Hub for any changes in the programming. Finally, if you disable

Auto Lock on your phone, you can kiss the power in your phone's battery goodbye. If you don't disable Auto Lock, you'll have to go through the aforementioned app boot-up process every time you want to change the volume. You could buy a tablet and dedicate it to your home theater or living room, with the app continuously running—and with the tablet continuously plugged into a charger. But a decent tablet will run \$100 or more, so you have to add that cost into

the mix.

Even after using iPad and Android tablets, I still found using the Ultimate Home's handheld remote to be a better experience. One reason was the tactile feedback, but a bigger reason was because it's easier to use the handheld remote and keep your eyes on the TV screen. Using tablets or phones to navigate through menus—or change the volume—often requires flipping your eyes back and forth between the device and the TV.

## Conclusion

The largest flaw in the Harmony Ultimate Home system is the lack of a beeper or other method of tracking down the handheld remote if it's been misplaced. I spent quite a bit of time while doing this review looking for where I had set down the remote. Once, it was on a bookshelf in the hall. Another time, it was in the kitchen. And those are just a few instances I can cite. Given the fact that the Ultimate Home has automation functions that might cause it to be used in any room in the house, a remote locator would be an awesome addition.

Ultimately, though, I think the Harmony Ultimate Home Control is the best universal remote control Harmony has ever made. It builds on Harmony's already phenomenal A/V system control capabilities with expanded Bluetooth and IP control of A/V components and judiciously adds compatibility with prominent home automation systems and devices. As a universal A/V remote control, it's the pinnacle of DIY remotes. Solely as a home automation controller, it works fantastically well with several devices and hubs but still has a ways to go before it's a truly universal home automation controller—and that issue may well be solved with the release of the Home Hub Extender. As a combo home A/V and home automation controller, there's no doubt that the Harmony Ultimate

### ● The Harmony handset comes with a recharging cradle.



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"SVS's Prime Satellite 5.1 system is as good as it gets for \$1,000... a genuine achievement."

*Daniel Kumin  
Sound & Vision*

"I had to watch it again and again to make sure I wasn't just fooling myself. It really is that good... Solid performance, striking design, exceptional build quality and all at a price point that is remarkable for what you get."

*Sam Posten  
Home Theater Forum*



# The Greatest Soundbar Ever

By Geoffrey Morrison

## RATING

Lirpa Labs MZ1-949r Soundbar

Performance ★★★★★

Features ★★★★★

Ergonomics ★★★★★

Value ★★★★★

## Lirpa Labs MZ1-949r Soundbar

**PRICE** \$1,019

A FEW YEARS AGO, WE REVIEWED the Lirpa Labs 1776, a speaker unlike any other, and a true statement in the audio world. Sadly, despite critical acclaim—it was widely considered to be the best speaker of all time—the 1776 was a commercial failure. Lirpa Labs held on briefly, with some, shall we say, “eccentric” headphones, but the company was nearly bankrupt. An ill-advised and poorly implemented app was a step too far.

Always one to see rising trends, Dr. Loof Lirpa knew his next speaker had to be a soundbar. But not just any soundbar, he told us in an exclusive interview. The *ultimate* soundbar. First, though, he needed capital.

### A Soundbar for the People

“I am a speaker designer first, a businessman second,” Dr. Lirpa explained. “I welcome the opportunity to work with the Chinese government on this project.” Given how patriotic his 1776 AF-Y speaker was, it came as a surprise to us that the good doctor would be so enthusiastically partnering with the Chinese. “Everyone makes everything in China these days,” he replied. “From Chiang Mai to Choibalsan, there are factories all over the country.”

To resurrect his brand, he said, Dr. Lirpa was able to secure funding from the Chinese government (the

### AT A GLANCE

#### + Plus

- Line array is audio perfection
- Perfect bass
- Incredible smart-home features

#### – Minus

- Design is a little common
- Adds red tint to images

details of which he refused to share), and he set out to create his magnum opus.

“The Lirpa MZ1-949r soundbar features a clean-slate design,” he proclaimed, “sharing no parts or materials with the old 1776 tower speaker. It’s completely different.

I’m told it’s an improvement in every way.”

The two rows of six horn-loaded, piezoelectric tweeters function as a dual-stage line array, the pieces working together to create a uniform soundstage, regardless of where you’re sitting in the room.

The tweeters share a mono 1,000-watt Class D amp. The phased-array layout tops out at 121,893 hertz and utilizes a digital multiplexing scheme that monitors the incoming signal and ensures each tweeter gets exactly the power it needs, and only the power it needs, when it needs it.

The woofer is powered by its own 1,000-watt Class A tube amp. Via elaborate internal ducts, the heat is carefully vented using the same side ports that vent the woofer. This configuration, Lirpa claims, reduces chuff and port noise, and the lower air density adds measurable and

noticeable bass output. (See our Test Bench lab results for the full story.)

Perhaps what’s most interesting about the Lirpa soundbar is its extensive complement of advanced smart-home features. Although smart TV streaming features have appeared recently in other bars, the appearance of home automation, smart control features, and more is a first in any soundbar we’re aware of, and perhaps a sign of things to come. To integrate with your current system, the MZ1-949r has not only Bluetooth and Wi-Fi wireless, but also a 100GbE enterprise-grade router/hub (five-port), and even an optional cable modem. For inputs, there are six HDMI, four opticals, and four analog ins that include a stereo pair of audiophile-ready XLRs. There’s one each of the same for outputs.

### Perfect Sound for All

Most soundbars make compromises in sound quality in favor of an attractive and convenient form factor. Not so with the Lirpa. It’s more lifelike than any speaker I’ve ever heard. The line array creates a soundstage with



● The MZ1-949r's tweeters are arranged in a phased-array layout.



## THE VERDICT

The **Lirpa Labs MZ1-949r** soundbar offers a new level of features and sound that everyone will love.



better width, height, and depth than even the best Dolby Atmos systems I've heard demo'd to date.

There's no need for a subwoofer, either. The main 12-inch woofer, with its insanely powerful amp, easily produces output down below that of most subs, including a good many 15-inch models I've heard. Its output was below the range of my in-room measurement gear, but by ear (and chest), I could easily feel power down in the subsonics. It's epic.

The Lirpa is capable of some incredible SPL as well, enough that your neighbors will hear every note of music, every line of dialogue. Dr. Lirpa informs us that this was a required design feature.

### Smart Soundbar

As earth-shattering as the Lirpa sounds, it's the home automation and control (HAC) that really sets it apart.

It goes without saying that the Lirpa will control the other gear in your system. Using either Ethernet or IR (blasters front and back), it draws on a database of more than 500,000 products, so even your most obscure gear is probably good to go.

In a feature I've never seen before, setup is entirely by voice. Synthesized speech leads you through the steps, and you just say the names of the products you have. The voice is so realistic, I'd have sworn a real person was inside.

There's no traditional remote. Want to turn up the volume? Just say, "Lirpa, volume up." Sure, the Xbox One with Kinect has functionality like

this, but the Lirpa goes one step further, letting you control *all* your other gear (and all their commands) with voice, too. It's a staggering achievement.

Built-in cameras let you Skype, but they also have facial-recognition functionality. Lirpa stores the visages of you and your family on the company's new Complete Community Cloud Program. This allows the soundbar to monitor the room. Then, after detecting who's in it, the bar adjusts sound profiles, volume, and even content accordingly.

For example: Want to finish the movie you fell asleep watching last night? The Lirpa remembers, and it will restart at the part where you fell asleep (presuming it was streaming, Blu-ray, or DVR'd content, of course).

The Lirpa also remembers your favorite channels and shows, storing them all in the cloud, so you can quickly scan only among the channels you like. This Favored Content Status is also stored on the Lirpa cloud, and it includes not just channels but also streaming content, as well as Websites browsed on the built-in browser. As the Lirpa gets to know you and your family, it will even automatically block content from you or your kids that it thinks you'd find objectionable.

In order to save all of this, you're of course required to register. Frustratingly, the Lirpa voice prompt system won't let you proceed without registering. It gets (and perhaps I'm anthropomorphizing here) rather insistent. Name and e-mail address are reasonable requests, but other data like phone number and physical address seemed superfluous and intrusive to me.

The Lirpa not only remembers your Wi-Fi settings and password but also stores settings for your neighbors' Wi-Fi networks as well. Lirpa claims this is for better accuracy for locational services, such as Google Maps.

Although I wasn't able to test its home automation function, the Lirpa can act as the central control hub for

## SOUNDBAR

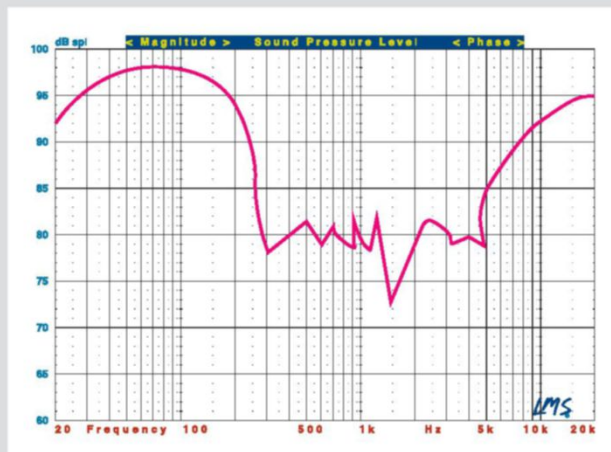
### LIRPA LABS MZ1-949R SOUNDBAR

PRICE: \$1,019

Lirpa Labs • (800) 264-9872 • [bit.ly/LirpaLabs](http://bit.ly/LirpaLabs)

## Test Bench

### Lirpa Labs MZ1-949r Soundbar



**MZ1-949R (red)** +15.22/-7.53 dB, 200 Hz to 10 kHz; -3 dB @ 2.5 Hz, -6 dB @ 1.67 Hz.—MJP

## SPECS

**Dual Line Array:** 7 x 3 in horn-loaded piezoelectric tweeters (6); 3.5 in piezoelectric horn tweeters (6); 1,000-watt mono multiplexed Class D amp (line array), 12 in polypropylene cone woofer (with D.O.T.S.); 1,000-watt Class A tube amp (woofer); 46 x 15.5 x 14.5 in; 50 lb • **Inputs:** HDMI (6), optical digital (4), analog stereo (4), Bluetooth with aptX, 100Gb Ethernet, 802.11a/b/c/d/e/f/g/h/i/j/k/l/m/n/o/p

lighting and HVAC systems. Security systems, too, whether they take the form of additional cameras (to augment the soundbar's built-in ones) or a full traditional system. All can be integrated into the Lirpa with its voice and cloud features.

Though there's no control app, it's recommended you connect the soundbar to your phone. This gives you access to the beta for the LirpaTime app, which is like FaceTime or Skype, but automatically stores your conversations on the cloud for later access.

### Bottom Line

From its superlative sound to its innovative smart-home features, the

Lirpa Labs MZ1-949r has set the, ahem, bar for the competition. There is nothing else like it, and it marks a truly magnificent return to form for Dr. Loof Lirpa. I'm proud to say this is one review sample that came into my home and never left. It has truly become the fully integrated centerpiece of my system, and I can't imagine a time without it. ♦

● The MZ1-949r's tweeters share a mono 1,000-watt Class D amp.



# Almost There

By Al Griffin

## Sharp LC-60UD27U LCD/LED HDTV

**PRICE** \$2,000

**THE ONLY** TV-TECH BUZZWORD with any legs to it in 2014 was 4K, aka Ultra HDTV. So a TV manufacturer without new 4K-resolution product had better start thinking about packing it in. Sharp previewed a pair of UD27 series Ultra HDTVs last June, and the company finally squeezed out those models just in time for the holiday shopping season. What do the new 60- and 70-inch Sharps have to recommend them over other, similarly priced offerings? Let's check things out.

Sharp's UD27 series is 4K THX Certified. This means it has, in Sharp's own words, "passed more than 400 rigorous tests, meeting the highest standards in picture performance." Also, its THX 4K Movie Mode preset "delivers the best possible pre-calibrated video setting according to tests and measurements performed in THX labs for

### AT A GLANCE

#### + Plus

- Accurate color
- Crisp, noise-free images
- Eco-friendly Wallpaper mode

#### - Minus

- Below average contrast
- Poor picture uniformity
- Unimpressive Smart GUI and streaming options

(AquoDimming isn't available for Ultra HD input sources.) Sharp also touts something called Spectros Rich Color Display for the UD27 series, which enables the set to come close to matching the DCI color standard, a wider color gamut than is currently used for 1080p. Here again, there are no available video sources encoded in DCI Standard color at present, nor any clear guarantee today that the television's input will recognize such

viewing Ultra HD and upconverted movies right out of the box."

UD27 TVs feature a native 120-hertz, 10-bit display panel (which remains of questionable value in today's absence of 10-bit content) and an edge-lit LED backlight. There's no hardware-based local dimming; instead, sources up to 1080p res benefit from AquoDimming, Sharp's pixel-based contrast-enhancement processing.

### RATING

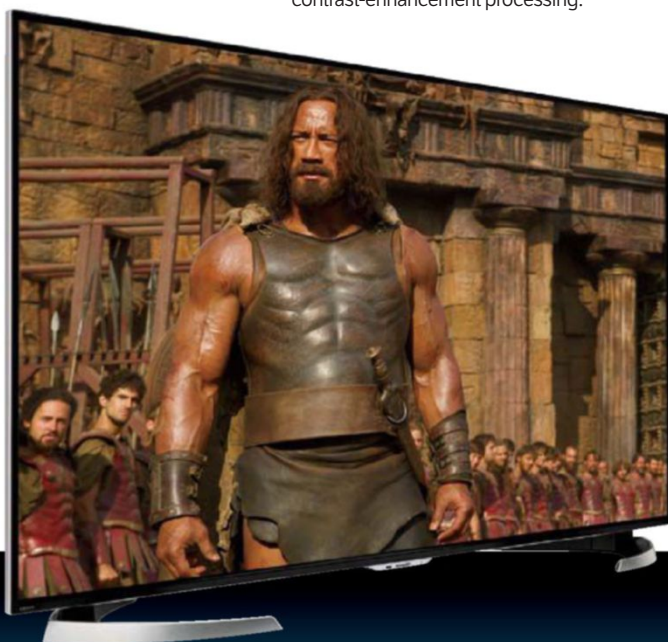
Sharp LC-60UD27U LCD/LED Ultra HDTV

Performance ★★★★★  
Features ★★★★★  
Ergonomics ★★★★★  
Value ★★★★★

content, so any such extended color space can be considered overkill on a TV for now.

Fortunately, the sets' THX picture preset displays images in the regular old Rec. 709 color space that's an accurate match for current HD and Ultra HD content. Incidentally, the UD27 series TVs aren't equipped to display 3D images.

Along with providing Ultra HD resolution, any new high-end TV these days needs to be smart. Sharp's own spin on smart TV is called SmartCentral 3.0. This provides a Smart Guide with content search capability, along with Miracast for wireless screen mirroring of content from tablets, smartphones, and laptops. Compared with the sophisticated interactive GUIs found





## THE VERDICT

**Sharp's 4K THX Certified** UHDTV gets many things right but some key things wrong.

on TVs from LG, Samsung, Panasonic, Vizio, and perhaps others, Sharp's smart offerings are, frankly, unimpressive. At least you get 4K Netflix streaming capabilities, along with a cool, eco-friendly feature called Wallpaper mode that lets you run image slideshows from an attached USB drive or pre-installed image bank when the set is powered off. Any photo over 8 megapixels in size will be displayed at full Ultra HD resolution.

While it may not be all that smart, the 60-inch LC-60UD27U that Sharp sent me is pretty to look at. Its screen is bordered by a black, barely-there 0.4-inch bezel. The company's appealing "Scorpion" stand design has an inward arc that firmly supports the display while taking up only a

minimum of surface area. Unlike the other UHDTVs I tested in 2014, the LC-60UD27U provides not one but four HDMI 2.0/HDCP 2.2-compatible inputs. There are three USB ports and an SD card slot to feed media to the TV, and it can play content from a computer or NAS over a wired or wireless home network.

Sharp's remote control is serviceable, though it's loaded with small buttons and lacks a backlit keypad. The good news: It's got a big red button that sends you directly to Netflix. Sharp also offers a remote control app for smartphones and tablets. I had difficulty getting this to work, however, and I could find no documentation to guide me—onscreen, in print, or anywhere else.

## SHARP LC-60UD27U LCD/LED ULTRA HDTV

**PRICE:** \$2,000

Sharp • sharpusa.com

### Setup

I made picture adjustments to the LC-60UD27U in its THX Movie mode with Dark Room setup selected. The advanced settings available in that mode include 2- and 10-point color temperature calibration, a full color management system (with Hue, Saturation, and Value adjustments), and multiple gamma presets. Additional settings include a Resolution menu for fine detail adjustment, Motion Enhancement (with Sharp's AquoMotion 480 backlight scanning), and the AquoDimming pixel-based contrast enhancement.

At the default THX Movie mode/Dark Room settings, the Sharp's gray scale had a distinct bluish bias, though color points and gamma

measured reasonably close to the desired targets. Although AquoDimming processing couldn't be applied to 4K signals, it did serve to double the Sharp's otherwise below-average contrast and black-level performance for 1080p sources. Edge enhancement and ringing proved to be issues at the default THX settings, though their effects could be minimized by reducing the Detail adjustment slider in the Resolution menu to zero.

Curiously, none of the pre-sets provided in the LC-60UD27U's AquoMotion menu helped to boost motion resolution when I was viewing test patterns on the TV. Such settings are usually accompanied by a serious dose of soap-opera effect, however, so I wasn't concerned.

### Performance

The combination of the Sharp's accurate color and high brightness made most programming I watched on it look pretty good. The Xbox One games I played had a punchy appearance, and there was only a minimal level of input lag. At my typical 8-foot viewing distance, 4K Netflix content such as *Breaking Bad* episodes and a nature documentary that I streamed looked crisp and noise-free, but at the same time, there didn't appear to be much of a picture quality advantage over regular 1080p programs—at least not on my test sample's 60-inch screen.

I streamed the acclaimed British TV series *Broadchurch* from Netflix and was impressed by how natural the landscape of the quaint English seaside community looked. Skin-tones of the Detective Inspector (David Tennant) and the various townies he questions during his

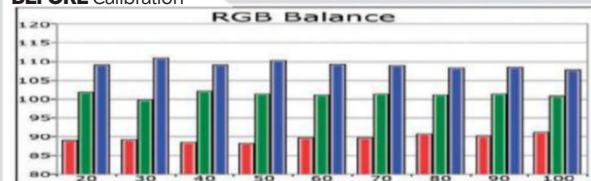


● **The Sharps' screen is bordered by a thin 0.4-inch bezel.**

# Test Bench

## Sharp LC-60UD27U LCD/LED Ultra HDTV

BEFORE Calibration



AFTER Calibration



● The measurements here were made using CalMAN measurement software from SpectraCal and a Photo Research PR-650 color meter.

Full-On/Full-Off Contrast Ratio: 6,217:1

**FOR** the picture settings plus additional details on calibration and video processing tests for this review, go to [soundandvision.com](http://soundandvision.com).

**PRE-CALIBRATION** measurements were made in the THX Movie Dark Room preset at the default settings. Post-calibration measurements were made in the same mode. With the LC-60UD27U's AquoDimming processing set to High, its black level measured 0.006 foot-lamberts and peak white 37.3 ft-L, for a contrast ratio of 6,217:1. With AquoDimming processing switched off, black level measured 0.012 ft-L and peak white 36.8 ft-L, for a contrast ratio of 3,067:1. The Medium and Low AquoDimming modes delivered about equal or worse contrast than simply leaving the processing turned off.

**THE** Sharp's performance in black level and contrast is notably worse than that of most other TVs *Sound & Vision* has tested that provide hardware-based local dimming.

**BEFORE** calibration, the Sharp's gray scale showed a distinct bluish bias at all IRE levels. The Delta E of its pre-cal gray scale averaged out to 11.4; calibration greatly improved that average to 1.4, with a high of 3.5 at 20% brightness. Gray-scale tracking was smooth throughout its entire brightness range. (Delta E is a figure of merit that indicates how closely a display adheres to the Rec. 709 HD color standard. Experts generally agree that levels below 3 are visibly indistinguishable from perfect color tracking.)

**THE** Delta E of the Sharp's color points at the THX Movie Dark Room preset default settings averaged a just-OK 4.4. Calibration improved that to 2.5.

**WITH** High AquoDimming turned on and the default Gamma preset selected, gamma in the THX Movie Dark Room mode averaged 2.16, hitting 2.2 at 90%. Calibration improved that to 2.2, with mostly linear tracking through the full IRE brightness range.

**FULL-FIELD** gray test patterns revealed uniformity problems. Spotlights were particularly visible when displaying a 0% (black) pattern, and they could also be seen on regular program material.

**OFF-AXIS** performance was about average, with contrast and color starting to fade when viewing about 20° off from center-screen.

**THE** Sharp passed all of our standard- and high-def video-processing tests, as well as the clipping and luminance/chrominance multiburst tests. The set's AquoMotion mode failed to improve motion resolution at all presets.—AG

## SPECS

**Dimensions (WxHxD, Inches):** 53.8 x 32.8 x 14.7 (with stand); 53.8 x 30.7 x 2.7 (without stand) • **Weight (Pounds):** 64 (with stand); 61.7 (without stand) • **Video Inputs:** HDMI 2.0 with HDCP 2.2 (4; 1 ARC, 1 MHL), component video/composite video (1, shared), RF • **Audio Inputs:** Stereo RCA (2) • **Other:** Ethernet (1), RS-232C, USB (3), SD card slot • **Audio Outputs:** Stereo RCA (1), optical digital audio (1)



● The LC-60UD27U provides four HDMI 2.0/HDCP 2.2-compatible inputs.

investigation were perfectly pasty and spot-on, while picture detail was exceptionally good for streamed 1080p content.

Next, I moved on to even darker content. With *Joe*, a recent Blu-ray release starring Nicolas Cage as a work crew supervisor in the Deep South who has trouble keeping himself out of jail, I began to be less impressed with the Sharp's performance. This film is a Southern Gothic in the best sense of the genre, with blood rivalries and squalor, and it features plentiful scenes of people drinking and smoking in shadowy living rooms and bars. Such scenes proved to be a challenge for the LC-60UD27U: Shadows lacked depth, and the set's uniformity issues gave the image a mottled effect, with some areas of the screen looking lighter than others. Basically, whenever dark content in the picture passed a certain threshold, the image flattened out,

and the illusion of depth was broken.

Off-axis viewing was typical for an LCD display, with picture contrast fading when I moved about 20 degrees off from a center seat. Multipixel Drive, a feature meant to provide a wider viewing angle, helped to improve things somewhat, though the results weren't as good as what you'd get with an In-plane Switching (IPS) LCD panel. (Or a plasma TV, for that matter!) The Sharp's screen has a glossy coating, but

screen glare was less of an issue than what I've seen with other sets when viewing in a bright room.

## Conclusion

Sharp's 4K THX Certified LC-60UD27U can be counted on to provide accurate color and detailed, noise-free images. And it does so at a price that's affordable compared with that of 60-inch UHDTV offerings from other manufacturers. Where Sharp's set comes up short is in its lackluster contrast ratio and picture uniformity; I had trouble getting through a movie without seeing numerous spotlight effects. And then there are the smart GUI and streaming options, both of which come up short compared with those of other leading UHDTV brands in this price range. So is the LC-60UD27U worth a look? Yes, but I'd advise making a careful survey of its competition before taking the jump. ♦



● Sharp's remote has a big button to take you straight to Netflix.

**The Sharp can be counted on to provide accurate color and detailed, noise-free images.**



It's here. The redefinition of your audio and video experience. The Emotiva XMC-1 combines precision 7.2 HD surround decoding, balanced audiophile multichannel preamplification, and full 4K video management with the power of Dirac Live™. Whether you're running the latest movies or high-definition audio, get ready for the most powerful, immersive experience you've ever had.

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# Playtime with Play-Fi

By John Sciacca

## Definitive Technology Wireless Collection Multiroom Audio System

**PRICE \$3,295**  
as reviewed

FOR A WHILE, AUDIO MANUFACTURERS seemed resigned to give it the ol' "lie back and think of England" routine when it came to accepting Sonos as the dominant force in the wireless audio world. Sure, they might not have liked it, but they weren't offering any compelling alternatives of their own. And while there had been some challengers in the past, most fell well short of the Sonos benchmark and quickly faded.

This tide has changed lately, however, and the war for wireless audio is heating up. Multiple systems are now offering their spin on wireless music distribution and hoping to take a bite out of the Wi-Fi audio pie. And unlike past attempts, several of these new solutions are not only good, they're great. Darryl Wilkinson recently reviewed two top rivals for Sonos' throne, Bluesound (S&V, June 2014) and Denon's HEOS (S&V, January 2015). Now, well-regarded speaker manufacturer Definitive Technology is throwing its hat into the ring by embracing Play-Fi in its new Wireless Collection.

### The Surround People?

You might not have heard of Play-Fi, but I'll wager you know the parent company behind it: DTS. Yup, as in the company best known for its multichannel surround sound formats.

Play-Fi was developed by a company called Phorus, founded by a former tech executive at Harman International; DTS acquired it in July

**AT A GLANCE**

+

Plus

- Stellar audio quality
- Sleek-looking components

-

Minus

- Android app is pretty basic
- iOS app very limited
- Doesn't currently support true high-res listening

2012. It uses a home's existing network—wired or wireless 802.11a/b/g/n—to distribute music. Unlike, say, Bluetooth, Play-Fi doesn't degrade the audio signal with data reduction or compression. It arrives at the playback device as a bit-for-bit duplicate of the original file.

Another of Play-Fi's advantages is that it's an open platform that can be licensed by any manufacturer, so devices from different brands can happily coexist and interact in the same system. This means you can mix and match Play-Fi products from Definitive Technology and any other company and have them all operate from the same control app. Since Paradigm, MartinLogan, Anthem, McIntosh, Sonus Faber, and Wadia have all announced plans to jump aboard the Play-Fi train, the Play-Fi

technology should provide a ton of audiophile-quality options.

When I asked Joel Sietsema, Definitive's director of brand management, why the company chose Play-Fi, he offered some valid and compelling reasons. He shared that Definitive considered developing its own wireless system in-house early on in the process but ultimately chose to adopt Play-Fi because "it is a high-performance solution from a proven supporter with lossless transmission."

Sietsema added, "Definitive Technology wanted an open ecosystem so we could offer our customers the freedom of choice, and wanted to work with a partner that was committed to the high-performance audio space."

### Going for the W

Definitive's Play-Fi lineup, or "Wireless Collection" series, designates all products with a W preceding the model name or number. While you can start a system with any one of these components (at relatively low cost), to get the full housewide Play-Fi distribution experience and a sense of how each product performs, I asked Definitive to send me the entire lineup—currently five products—for review.

In standalone, self-powered

speakers, Definitive offers the cube-shaped W7 (\$399) and its larger, rectangular brother, the W9 (\$699). Definitive went with a reserved yet high-tech, sleek design with these speakers, both featuring a gloss black top and solid aluminum silver base with the company's typical black-wrapped cloth around the middle. Visually, they are cool and modern. Two speakers can be paired in a left/right array to deliver improved imaging and coverage. (Pairing was limited to Android users at the time of my evaluation, though Definitive expected iOS pairing to be available in early 2015.)

The W Amp (\$499) is a stereo amplifier/player module (2 x 150 watts at 4 ohms) designed to power virtually any pair of existing speakers. Adding Play-Fi to existing amplified audio systems like a home theater or stereo receiver requires the W Adapt (\$399). The W Amp and W Adapt are nearly identical visually save the connections around back. Both are finished in gloss black with a stylish and angular front face and a strip of silver (on the Amp) or matte black (on the Adapt) along the top holding the few onboard controls. Definitive includes rack-mount brackets with each, allowing them to install into professional audio racks favored by custom installers. Two of these devices can be racked together in a 1U space, making for a very clean and finished look in the rack.

I'm going to offer a bit of a spoiler here and say the W Studio soundbar system (\$1,299) is my favorite product in the line. The W Studio, a Play-Fi-equipped version of Def Tech's



● The W9 and W7 speakers share a sleek, cool look, and both include wall-mount brackets.



## THE VERDICT

The speakers sound amazing and the W Studio soundbar is a home run even without its multiroom capabilities, but the limited Play-Fi app for streaming leaves Def Tech's W system lagging behind the best systems.

## AUDIO SYSTEM

### DEFINITIVE TECHNOLOGY W WIRELESS MULTIROOM AUDIO SYSTEM

**PRICE:** \$3,295 (W7, \$399; W9, \$699; W Studio, \$1,299; W Adapt, \$399; W Amp, \$499)

**Definitive Technology •** (800) 228-7148 • [wireless.definitivetech.com](http://wireless.definitivetech.com)

SoloCinema Studio, will likely be the company's Trojan horse for getting Play-Fi into people's homes. If you never even utilized the W Studio's Play-Fi feature, it's still a killer soundbar. But when you find out that it offers all of Play-Fi's streaming benefits, you'll think, "Wow! That makes TV and movies sound great! But it does even more than that?!"

At 3.3 inches deep (3.8 with the suggested wall-mount spacer rings), the soundbar isn't as svelte as modern flat screens, but it's thin enough not to draw undue attention to itself. While its silver end caps and cloth-wrapped design echo the look of the W7 and W9, it is the plainest looking of the bunch. The W Studio can learn commands from another IR remote, letting you easily power it on, change inputs, adjust volume, and more from any other IR remote.

The wireless sub has no controls whatsoever save a power toggle and is spared from being an entirely plain, black cube by a silver badge/Definitive nameplate on the front. *[Ed. Note: You can read Dan Kumin's review of the non-Play-Fi SoloCinema Studio (which, at \$999 costs \$300 less than the W Studio) at [soundandvision.com](http://soundandvision.com).—RS]*

Although they're called wireless, almost every Wireless Collection component can connect to your

network via wired Ethernet or Wi-Fi (with up to dual-band 802.11n protocol), the exception being the Wi-Fi-only W Studio. Assuming your home has a robust, reliable Wi-Fi network, you should have no problem placing your devices and then walking around the house streaming to your heart's content. This is obviously a huge benefit over systems that rely on limited-range Bluetooth for streaming, as you inherently walk off with the broadcasting device in your pocket, only to have music unceremoniously cease.

Definitive claims the system can simultaneously support up to eight separate wireless sources (smartphone, tablet, PC), with any source able to stream to eight playback devices. While this suggests a maximum of 64 devices, Definitive recommends no more than 16 products on the Wi-Fi network but claims up to 256 devices could be "theoretically supported" if connected via Ethernet.

Beyond streaming music, the Wireless components feature both Toslink optical digital and analog audio inputs (both the W Adapt and W Amp feature two analog inputs) for connecting local sources. While these sources currently can't be digitized and streamed around the house,



Sietsema commented, "There are future plans for this, and we are working with DTS to determine when this feature would be available through the software." Each component also includes a USB-A connection reserved for firmware updates.

As it's designed to integrate with an HDTV, the W Studio features 3-input/1-output HDMI 1.4a switching in addition to Toslink and analog inputs. Since many TVs don't pass unadulterated Dolby Digital or DTS bitstreams from their digital outputs, connecting your set-top box or Blu-ray player directly to the soundbar yields higher-quality, multichannel audio. The soundbar supports both Dolby Digital and DTS decoding, but not lossless Dolby TrueHD or DTS-HD Master Audio. (Incidentally, the ability to directly connect multiple HDMI sources and to directly decode Dolby Digital and DTS signals is a notable advantage the W Studio has over Playbar, the competitive Sonos offering.)

### Setup

Wireless audio systems are generally intended for DIY installation, so setup needs to be relatively simple and painless. Fortunately, Definitive succeeds on this front, as both the initial setup and adding new devices is a breeze.

Wired setup is a no-brainer. Simply connect the component to your network via Ethernet, and the

new device will be discovered when you open the app; it will then prompt you to name it. Done.

Wi-Fi setup differs slightly with Android and iOS devices. The Android app involves just selecting your home's Wi-Fi network and entering any security credentials. The iOS app requires you to first go to your Wi-Fi connections tab, where you'll connect directly to the new device, à la "PlayFi2Device008922." That done, open the Definitive app and select your home's Wi-Fi network and enter the password.

Should you ever need to make a change—say, using a new router or a changed Wi-Fi password—a setup button on each component puts the device into setup/discovery mode.

If you hit a major install snag, every Wireless Collection component comes with a very elegant silver-embossed black card that gives owners access to the Definitive Aficionado program, which offers extended-hour live telephone support seven days a week and other benefits.

### Apps, Separate but Not Equal

Definitive offers free versions of its Play-Fi control app for Android (OS 2.2 or newer), iOS (6.0 or newer), and Kindle operating systems. A free "Play-Fi App for Windows" is available at <https://play-fi.com>, offering very basic PC control. A full, licensed version of the app called Play-Fi HD is available for \$14.95, but Definitive lovingly e-mails a download code

● The W Studio soundbar is a Play-Fi-equipped version of Definitive's well-regarded SoloCinema Studio.

## TEST REPORT

● The W Studio's subwoofer delivered impactful, tactile bass.

## RATING

Definitive Technology  
W Studio Soundbar System  
Performance ★★★★★  
Features ★★★★★  
Ergonomics ★★★★★  
Value ★★★★★



See [soundandvision.com](http://soundandvision.com)  
for full lab results and technical definitions



for the premium version once you register your system.

Since front-panel control on the speakers is limited to volume adjustment, source cycling, and play/pause of streaming music, the app is the crucial, sole point of control. (The W Studio does include a handheld IR remote.) While the app is serviceable, it feels a little plain and limited, especially compared with the apps that companies like Sonos and Bluesound offer.

For example, you can't currently search or "jump to" a letter—like "T" for Talking Heads—when you're browsing content on a networked drive. Instead, browsing requires you to swipe through pages of stored music—sorted by album, artist, genre, etc., depending on the media server—until you arrive at what you want to hear. Searching is available for Internet radio stations and podcasts, which allowed me to easily locate "Rob Has a Podcast," my favorite reality show recap. At the time of my test, the app would not let me create a queue or playlist on the device. Instead, when you select something new, it wipes out whatever you had been listening to. [Ed. Note: Def Tech informed us at press time that stored playlists had been enabled on the Android and Kindle apps and that iOS playlists were pending.] Also, whichever device or controller you use to create a music listening session—your smartphone, for example—must remain on,

app running, and connected to the Wi-Fi network. Should the controlling device leave the network area, turn off, close, or have an app crash, the music stops. Taking control of a speaker being streamed to by another controller also stops the music; there's no way to access another player's "now playing" function and then select new music or even adjust the volume. [Ed. Note: An update for this was also said to be pending.]

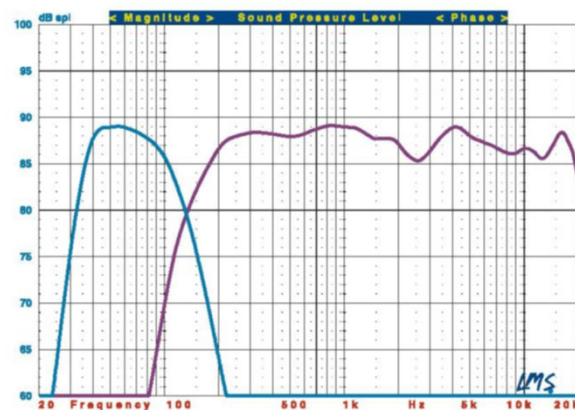
While multiple controllers can be used at once—each streaming away to one or multiple players—these kinds of control "rules" make the system less ergonomically friendly. I found this to be the case especially after living with Sonos and Bluesound, where I freely jumped between apps on my computer, iPhone, and iPad, selecting and changing music in any and every room from any controller. In comparison, Play-Fi's restrictions feel a lot more, umm, restricting.

I typically rely exclusively on the iOS version of a control app on either my iPhone 6 or—preferably—an optimized iPad version. Usually the iOS app offers the best experience, but unfortunately, not only is there no optimized tablet version for the Play-Fi app, but the development of the iOS app is lagging so far behind the Android version that I had to borrow my wife's LG phone to experience several features via Android. (I did not have a chance to experience the Kindle app.)

For a while, the only streaming service available to Play-Fi iOS users outside South Korea was Pandora. (Fortunately, a recent update added

## Test Bench

### Definitive Technology W Studio Soundbar System



**Soundbar (purple)** +0.92 / -2.92 dB, 200 Hz to 10 kHz; -3 dB @ 181 Hz, -6 dB @ 150 Hz.

**Subwoofer (blue)** Close-miked response, normalized to level @ 80 Hz: lower -3 dB @ 36 Hz, -6 dB @ 34 Hz, upper -3 dB @ 106 Hz.—MJP

## SPECS

**Soundbar:** 3 in woofer (6), 1 in aluminum-dome tweeter (3); 120-watt amplifier spread over nine channels; 43.02 x 3.3 x 3.3/3.8 (WxHxD/with wall spacers); 13.8 lb • **Subwoofer:** 8 in woofer; 200-watt amplifier; 12.54 x 14.03 x 12.77 in (WxHxD); 20.7 lb • **Inputs:** HDMI 1.4a (3), Toslink optical digital, 3.5mm analog, USB-A (for firmware updates), 3.5mm infrared • **Outputs:** HDMI 1.4a, 3.5mm IR emitter

Songza and Deezer. Android users have Sirius/XM as an option, which Definitive says should come to iOS in early 2015.) The licensed Play-Fi PC app allows a variety of listening options, including streaming any audio the PC is playing, a function that Sonos does not provide. However, the computer app added a fairly significant delay (around 4 seconds) when I was streaming, making it unusable with any video-based programming like YouTube or Netflix due to lip-sync issues.

Here's yet another limitation: While you can have the same stream playing in up to eight locations, you can't listen to

multiple sources from one iOS device or a PC, such as playing Pandora in the bedroom and Songza in the kitchen. With these, when you select a new location—say, changing from the bathroom speaker to the dining room speaker—the original zone will stop playing. On the other hand, the Android app can support up to four separate streams of music, adding whichever rooms you want to create a unified zone or even creating speaker groups to easily add multiple rooms. However, it can support only a single



● The W Studio soundbar is thicker than most flat panels at 3.3 inches deep.

**The W Studio will likely be the Trojan horse for getting Play-Fi into homes.**

● The W Studio includes a remote with a dedicated center channel control.





# oppo



## Award-Winning Audio / Video Products

- HA-1 Headphone Amplifier / DAC / Pre-amp
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## TEST REPORT

● **Most components can connect to your network via wired Ethernet.**

## RATING

**Definitive Technology W9 Wireless Speaker**  
 Performance ★★★★★  
 Features ★★★★★  
 Ergonomics ★★★★★  
 Value ★★★★★



See [soundandvision.com](http://soundandvision.com)  
 for full lab results and technical definitions



instance of each service—say one Pandora, one Songza, or one Internet radio feed at a time. The Android app also has a fairly handy setting to automatically pause music if you get a phone call.

Definitive tells me the app differences are due to the approval process from Apple, and they expect to ultimately create parity between the two apps in early 2015.

### Playing with Play-Fi

I happen to own Definitive Technology's current flagship speakers—the Mythos ST-L—so I'm familiar with the company's approach to sound and was expecting great audio from the W7 products. Not only did they not disappoint, they exceeded my expectations.

The W7 is small enough to work well in a crowded bathroom or on a kitchen counter or office desk, and it's

portable enough that I used it in all three. The side-firing tweeters do a nice job of expanding the W7's soundstage beyond its svelte cabinet, making it sound like a much bigger speaker. The four tweeters also produced the cymbal strikes from Pink Floyd's "The Great Gig in the Sky" with the proper weight and decay, remaining clearly audible and distinct even during Clare Torry's unique vocal stylings. The astonishing thing is how much bass detail this little cube produces without sounding bloated or boomy. One of my favorite bass test tracks is The Crystal Method's "High Roller," and while the W7 couldn't plumb the lowest notes reached by subwoofers, it delivered terrific low-end response. For comparison, I synced a playlist and played the W7 alongside the identically priced Sonos Play:5 speaker. To say the W7 sounded superior would be a gross understatement. The W7 sonically devastated the Play:5, trouncing it in low-end and midrange clarity and high-frequency detail.

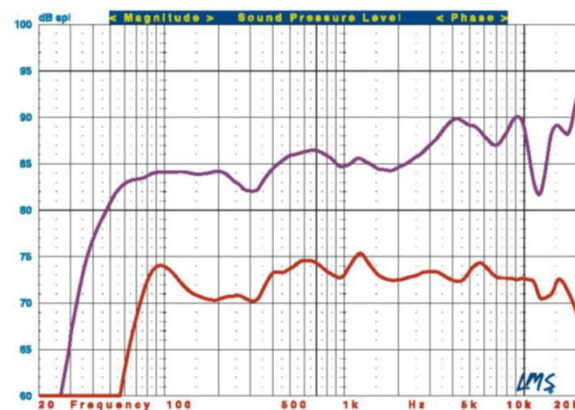
## RATING

**Definitive Technology W7 Wireless Speaker**  
 Performance ★★★★★  
 Features ★★★★★  
 Ergonomics ★★★★★  
 Value ★★★★★



## Test Bench

### Definitive Technology W7 and W9 Wireless Speakers



**W9 (purple)** + 4.59 / -3.42 dB, 200 Hz to 10 kHz; -3 dB @ 57 Hz, -6 dB @ 46 Hz.

**W7 (red)** + 1.81 / -3.34 dB, 200 Hz to 10 kHz; -3 dB @ 75 Hz, -6 dB @ 68 Hz.—MJP

## SPECS

**W7:** 4 in woofer, 1 in aluminum-dome tweeter (4), 4 in bass radiator (2); 1 x 30-watt amplifier (woofer), 4 x 15-watt amplifier (tweeters); 5.87 x 6.93 x 6.65 in (WxHxD); 5.8 lb • **W9:** 5.25 in woofer (2), 2 in side-firing full-range driver (2), 1 in aluminum-dome tweeter (2); 2 x 70-watt amplifier (woofers), 4 x 10-watt amplifier (full-range and tweeters); 16.54 x 7.44 x 7.28 in (WxHxD); 16.8 lb • **Inputs (Both Models):** Toslink optical digital, 3.5mm analog, RJ45 Ethernet, USB-A (for firmware updates)

I expected the W9, being nearly triple the W7's width, to sound bigger, fuller, and deeper and to play louder, and it delivered on all counts, sounding more like a good sub/sat system than a desktop speaker. Beyond that, with its full-range side-mounted drivers, the W9 produced a much wider soundstage and can easily fill most rooms, sounding full and rich even off axis. While the W9 can produce serious volume levels, it doesn't require high SPLs to sound good. Even at low and modest volume, the W9 produces prominent bass with detailed midrange presence. At its size, the

W9 could serve double duty as a TV speaker, sitting on a shelf or cabinet below. To test it in this capacity, I connected my TV's Toslink output and listened to some TV and movie clips. I was impressed by how much dimensionality it produced from the opening surprise attack scene from *Master and Commander: The Far Side of the World*. The W9 delivered terrific width as well as height, putting sound well outside and above its cabinet. The W9 also showed off its bass performance, delivering a shocking amount of low-end depth from the cannon blasts. And it did a great job reproducing the live sound of *Stop*

● **The silver bases give the W components a high-tech look.**

**The W Studio's subwoofer is the best wireless sub I've heard with a soundbar.**



DNA:HELIX

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## TEST REPORT

● The W Amp turns any pair of passive speakers into a Play-Fi zone.

## RATING

**Definitive Technology W Amp Amplifier**

Performance ★★★★★  
Features ★★★★★  
Ergonomics ★★★★★  
Value ★★★★★



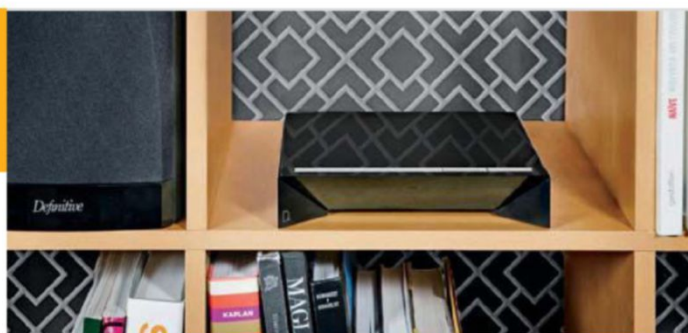
*Making Sense*, the Talking Heads' terrific 1984 concert film. The W9 convincingly delivered all of David Byrne's vocals and acoustic guitar licks, with solid bass detail on drum machine beats during "Psycho Killer." The W9's audio is a bit forward sounding, but this actually worked quite well with dialogue, helping it to stand out and be more distinct.

Unfortunately, the control app doesn't allow you to change inputs or even control volume on any of the devices if they are set to play any input besides wireless streaming. This means getting up and walking over to the W9 to adjust volume when you use it as a soundbar! Also, while the speakers sound great as is, there are no adjustments for bass, treble, or balance settings. Definitive does plan to release a separate app called Definitive Utility App that will enable input switching along with other features, but this will require

installing and using a second app for these relatively basic functions—not a great workaround.

When streaming music from my server, I also noticed the system added a *really* lengthy—like five-second—delay between tracks. This buffer gap makes listening to gapless albums like *The Dark Side of the Moon* or live concert recordings noticeably disjointed. And while Play-Fi can accept high-res files up to 192 kHz/24-bit to the devices, it currently downconverts these to 48 kHz/16-bit resolution for streaming around the home. This downconversion takes place even when you're only streaming a high-res file to a single speaker. I tried playing several of my better-than-48/16-resolution files using the iOS app, but this produced an "unsupported file format" error. After these same files played using my wife's Android, I reached out to Definitive, which confirmed this is another current iOS limitation that the company expects to rectify in an update; support of Apple lossless files is expected sometime this year.

As mentioned previously, the W



## SPECS

**W Amp:** 2 x 150 watts (4 ohms) Class D amplifier; 8.46 x 1.73 x 8.98 in (WxHxD); 2.5 lb • **Inputs:** Toslink optical digital, 3.5mm analog, RCA analog, RJ45 Ethernet (2), USB-A (for firmware updates) • **Outputs:** RCA analog, subwoofer (RCA), left/right speaker binding posts

server, and auditioned hours of content on it. In truth, I used it as a terrific soundbar far more than as a music streamer. With music, the soundstage is more restrained, sounding more like a pair of bookshelf speakers placed just a few feet apart. However, the soundbar really shined with surround-encoded movie material. In fact, there were times while I was watching the brilliant TV show *Arrow* when ambient sounds were placed so far outside the width of the bar, I actually wondered if they were coming from another room. *The Fifth Element's* classic ZF1 scene created terrific swirling audio that wrapped around the listening area. The remote lets you tweak the W Studio's center-channel level, and even with lots of onscreen cacophony, such as the climactic finale of *The Desolation of Smaug*, dialogue remained clear and intelligible despite the dragon's fire and other mayhem. The W Studio's subwoofer is the best wireless sub I've heard with a soundbar. It handled everything I threw at it with aplomb and created tactile bass I could feel.

The W Amp delivered a lot of volume. With my speakers, it was more forward-sounding than I'm used to, producing prominent mids and highs. It has enough output to drive most speakers and would pair well with a good set of bookshelves. Nonetheless, I found it a bit bass-shy. When I listened to well-known tracks, like Miles Davis' "Kind of Blue," it just didn't deliver the same depth and low-end detail I've come to expect

from the Sonance VP-88 in-walls I connected it to. Critical listeners would probably want to connect a sub to the included output. There's not a lot to say about the W Adapt; I connected it to my Marantz AV8801 preamp, and it fed streaming signals to the AVR like a champ.

## Conclusion

It's impossible to review a wireless audio system without drawing comparisons to the established market leader, Sonos. And whereas you could argue Sonos is a software company that knows how to build a great app, you can definitely say Definitive Technology is a high-performance speaker company that knows a ton about making great-sounding speakers. To that end, the Wireless Collection products are all sonically terrific. Play any one of them next to a similarly priced Sonos, and if the comparison is solely on sound quality you'll choose the Definitive every time.

While I found the Play-Fi app—especially the iOS version—to be seriously wanting in several areas at this time, it's important to remember (as Def Tech repeatedly reminded us) that an app is just software, and software can be updated and improved. What you can't improve on is bad sound or an inherently weak speaker design. Fortunately, Definitive totally nailed that part, and assuming they and DTS continue updating and developing the control app, the Wireless Collection will be set up for a win. ♦

## RATING

**Definitive Technology W Adapt Player**

Performance ★★★★★  
Features ★★★★★  
Ergonomics ★★★★★  
Value ★★★★★



Studio is my favorite performer of the bunch. I installed it beneath my bedroom TV, connected to my Dish Hopper and Kaleidescape movie

● The W Adapt creates a Play-Fi zone from an existing audio system.

**The Wireless Collection is sonically terrific.**

## SPECS

**W Adapt:** 8.46 x 1.73 x 8.98 in (WxHxD); 1.6 lb • **Inputs:** Toslink optical digital, 3.5mm analog, RCA analog, RJ45 Ethernet, USB-A (for firmware updates) • **Outputs:** Toslink optical digital, coaxial digital, RCA analog



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# I Heart iBias

By David Vaughn

## RATING

Krell Chorus 7200 Amplifier

Performance ★★★★★

Features ★★★★★

Ergonomics ★★★★★

Value ★★★★★

## Krell Chorus 7200 Amplifier

PRICE \$9,500

## DO YOU REMEMBER WHAT IT

was like sitting for your high school or college lessons? Well, get ready for a trip down memory lane, because to give the Krell Chorus 7200 the praise it's due and explain just how much this "little"-amplifier-that-could is going to change the audio industry, we'll need to start with a short class in "classes."

There are many different established amplifier topologies out there, designated by class, as in Class A, B, A/B, D, G, and H. Each has its own set of pluses and minuses, but in the audiophile world, Class A has always been king for a variety of reasons. First and foremost is sound quality, which is virtually unmatched to those with golden ears—those things attached to the sides of your head, not the speaker company that Darryl Wilkinson always raves about. Audio signals are basically alternating current—the sine waves you learned about in grade school—with both a negative and positive voltage. Remember, the goal is to make a loudspeaker diaphragm move out (positive voltage) as well as in (negative voltage). The Class A amplifier has the ability to conduct the full audio signal, both the positive and negative portions of the cycle, on each output device, reducing distortion in the process.

Unfortunately, there's no such thing as a free lunch. There's one negative—and it's huge: Class A's efficiency is about as green conscious as a Lear jet carrying one passenger across the country. A pure Class A design has the output transistors operating at full power all the time; they're never idle. This means any energy not required to drive the speaker is released through the amplifier's heatsinks, turning the amp into a power-wasting space heater. Furthermore, the ability to place multiple channels in the same chassis is all but impossible due to

## AT A GLANCE

## + Plus

- A new take on amplifier classes with iBias
- Superb dynamics and soundstage
- Ethernet capability for system monitoring

## - Minus

- LED illumination too bright
- Extremely heavy

the heat buildup, which has essentially shut out the technology for the majority of home theater installations.

### What Exactly Is iBias?

Krell's audio legacy is built upon Class A amplification, and it's no surprise that their engineers have been able to develop a patent-pending circuit delivering traditional Class A-like operation without the excessive heat and wasted energy of conventional Class A. Furthermore, the design can be housed in a form factor fit for home theater applications. It's called iBias, but a better name may be iReallyLikel!

Krell's innovative iBias technology allows the amplifiers to run in full Class A mode as needed, while at the same time minimizing heat generation. Krell isn't the first to attempt using a "tracking" or "sliding" bias that reacts based on the nature of the audio signal, but their approach is quite different. In the past, the tracking monitored the incoming signal and set the bias based upon this information. The iBias

technology takes a different approach by calculating the bias from the output stage; it directly measures the output current of the amplifier and adjusts the bias to the optimum level. Because iBias measures the output current, the real-time demands of the specific speaker connected to the amp are directly incorporated into the circuit function. The amplifier monitors the load, accounting for the variables present at any given moment, rather than blindly reacting to the incoming audio.

The president of Krell Industries, Bill McKiegan, likes to compare this technology to a 12-cylinder automotive engine, which shuts down some of the cylinders when you don't need a lot of power. But when you slam the accelerator to the floor, the engine can deliver 600 horsepower—or more—almost instantly. iBias works virtually the same way. It can be cruising along in efficiency mode yet in a matter of microseconds give you hundreds of watts of full Class A amplification for musical peaks or when the action

kicks up in the latest Hollywood blockbuster.

With this new topology comes other benefits. Krell has been able to fit seven channels of amplification into a relatively small—though extremely heavy—rack-mountable chassis, making iBias practical for use in environments where a traditional Class A amplifier would be too large. That's not to say the Chorus doesn't generate heat; it certainly does. Krell cools the amplifier using thermostatically controlled fans, which are generally eschewed by audiophiles and home theater aficionados. Still, in all of my testing, I was never able to detect any audible noise from the four fans on the rear of the amp, and the output temperature measured with an IR thermometer never exceeded 115 degrees F, even under the most strenuous tests.

### Oh, My Aching Back

I was out of town when UPS delivered the amp, and the arduous task of bringing the 100-pound beast (110 including packing materials) fell to my 16-year-old son and one of his friends. It took two strapping teenagers to get this baby into the house, and while it's not the heaviest amp I've reviewed, it certainly is one of the most dense, and getting it into the rack was a serious chore.





## THE VERDICT

Krell's iBias technology has allowed them to deliver the benefits of a Class A multichannel amplifier in a way that will have audiophiles grinning from ear to ear.

Aesthetically, the Chorus 7200 is quite beautiful, as far as black boxes go. The front façade is matte black highlighted by a silver band running vertically through the center of the facing, where a backlit Krell logo protrudes slightly from the box. The left side features a small circular power button, while the right has a rectangular LCD that gives you the amp's IP address when it powers up.

Yes, I said IP address. You see, the rear of the amp has all the connections you typically see on an amplifier: both balanced and unbalanced inputs for all seven channels, the aforementioned fans, a 12-volt trigger input, a detachable power cord, a master power button, and, unusually, an Ethernet port.

Why put Ethernet in an amplifier? In this case, the amplifier can be accessed through any device that can run a Web browser, such as a smartphone, tablet, or computer. Using the interface, you or your dealer can monitor the heatsink temperature and fan speed, as well as configure the unit to send out e-mail notifications (up to three addresses) if its onboard diagnostics detect any faults. Furthermore, if there's ever a software upgrade for the amplifier, you can have the amp update its software from the Krell servers with the push of a button.

## The Fun Begins

Once I installed the seven-channel Chorus 7200, I hooked it up to my Marantz AV8801 surround processor and calibrated the sound levels to my speakers: three M&K S150s across the front, four M&K SS150 surround speakers, and two subwoofers—a brand-new HSU VTF-15H MK2 situated at about the midpoint of my right wall and an SVS PC-Ultra sitting in the front left corner of the room.

I lived with the Krell for a few days before really putting it to the test, but I was impressed by its neutral tonal quality out of the gate. Not too bright, not too laid-back. When I finally sat down for some critical listening, I truly started to appreciate how sweet this amp sounded.

I began with an eclectic collection of SACDs, including the *Telarc SACD Sampler 1* recording of "Moanin'" by Monty Alexander from his *Monty Meets Sly and Robbie* album. This jazz-meets-Jamaica recording features Alexander gracefully moving his fingers across the keys of a Yamaha grand piano while a smooth rhythm section plays in the background, with Sly Dunbar on drums (and riddim) and Robbie Shakespeare on bass. The song is a



## KRELL CHORUS 7200 AMPLIFIER

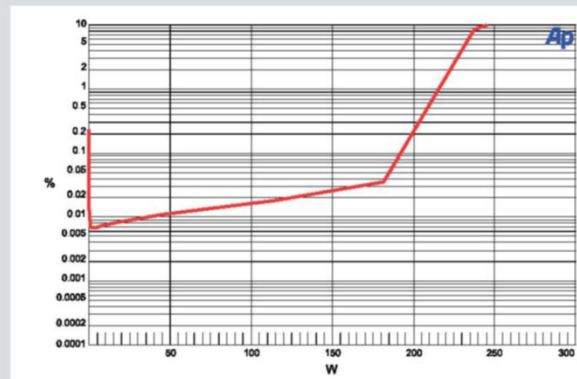
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## AMPLIFIER

## Test Bench

### Krell Chorus 7200 Amplifier



**AUDIO** This graph shows the Chorus 7200's channel 1 with two channels driving 8-ohm loads. Measurements for THD+Noise, crosstalk, signal-to noise ratio, and analog/digital frequency response were all within expected performance parameters. Full details available at [soundandvision.com](http://soundandvision.com).—MJP

|                                             | 0.1% THD    | 1.0% THD    |
|---------------------------------------------|-------------|-------------|
| 2 Channels Continuously Driven, 8-Ohm Loads | 192.4 watts | 215.7 watts |
| 2 Channels Continuously Driven, 4-Ohm Loads | 319.6 watts | 368.4 watts |
| 5 Channels Continuously Driven, 8-Ohm Loads | 134.4 watts | 163.0 watts |
| 7 Channels Continuously Driven, 8-Ohm Loads | 133.9 watts | 162.4 watts |

**SPECS** **Power Output:** 7 x 200 watts (8 ohms); 7 x 360 watts (4 ohms) • **Dimensions (WxHxD, Inches):** 17.1 x 7.65 x 21.10 • **Weight (Pounds):** 100 • **Audio Inputs:** Single-ended RCA (7); balanced XLR (7) • **Audio Outputs:** Binding posts (7 pair) • **Additional:** Ethernet (1), 12-volt trigger (1)

lot of fun, with Monty's piano slightly left of center, Sly's drums to the right, and Robbie's tight bass filling the room. Every strike of the piano is clean, and the midrange is full of body. As I pushed the volume higher and higher, the instrumental track never strained the amplifier, and it was able to resolve all of the detail in the music without any obvious coloration.

I could say the same for a number of Red Book CDs ripped to FLAC files on my home server. The Spin Doctors' "Two Princes" is lyrically challenged for sure, but I've always enjoyed the rhythm of the track, especially the percussion beat that opens the song and the guitar solo midway through that instantly transports me back to my early 20s.

Wow was the first thought in my mind as the drums kicked to life. Was the band playing live in my room? My reference Parasound Halo A 51 amp is a Class A/B that operates in Class A mode up to a few watts, but I can't say that I remember this recording sounding quite this crisp and clean, with the voices projecting well into the room and the guitars layered in the background.

Class A amp makers tout their products' ability to re-create voice, and here the Krell truly shined. Take the start of fun.'s "Some Nights," where Nate Ruess' voice kicks off the song with a catchy ballad-like opening that transports you back in rock history to harmonies from groups such as Queen and Styx (those bands also shine on the 7200).

Chorus 7200  
V1.01 Nov 22 2013

● The beefy Chorus 7200 is 100 pounds of solid amplifier.

## TEST REPORT

With this amp in the chain, Ruess' melody came alive with seemingly limitless dynamics, a 3D-like soundstage, and amazing detail.

This dynamic performance was readily apparent with every Blu-ray I threw at the Krell. The beach landing in *Saving Private Ryan* exploded into my room, with each discrete effect placed precisely in the soundstage. And the 7200 brought an uncanny

immediacy to softer passages, such as the opening monologue recited by Morgan Freeman in Clint Eastwood's *Million Dollar Baby*, where it truly sounded as if Freeman was sitting in the room with me describing Frankie Dunn's personality and why he

wouldn't train girls to fight. Impressive is an understatement.

### A Strong Foundation

I spent the vast majority of my review time using my reference Marantz surround processor, but Krell really



● The Chorus 7200 uses thermostatically controlled fans to dissipate heat.

wanted me to pair this fantastic amplifier with their entry-level Foundation surround processor (\$6,500, an S&V Top Pick of the Year, reviewed April 2014). Michael Fremer raved about the Foundation's prowess in his review, and I have to concur 100 percent. As good as the Chorus 7200 sounded with my Marantz, the Foundation took it up a notch, and I now have some serious processor envy and a strong case of upgrade-itis due to this combo's audio muscle. The Foundation isn't the most ergonomically friendly processor I've ever used—setting it up was about as much fun as a root canal—but it's by far the best-sounding. The soundstage is incredibly convincing: You can't really tell where the speakers are in the room, and the subwoofer integration is by far the best I've ever experienced. Like Michael, when I put my Marantz back in my rack, I felt like I needed a prescription for Prozac to fight the depression I was facing.

### Putting It Into Words

The hardest part of reviewing audio equipment is putting what you hear into words that can impart upon the reader just how impressive (or uninspired) a particular piece of equipment was to your ears. In the case of the Chorus 7200—and Foundation—it was six weeks of audio bliss for me and my family. My son actually sat on the couch with me to listen to music because it had never sounded so alive, but when I broke the news that the processor/amp combo cost \$16,000, he knew instantly our days of audio bliss were numbered.

The only complaint I have about both the amp and processor is the non-dimming backlight that hides behind the Krell logo on each unit. When I was listening to music, they didn't bother me one bit, but when the room lights were off and I was trying to watch a movie, the blue LEDs were so bright that I thought they might be able to lead a wayward ship into port after a long journey at sea.

At \$9,500, the Chorus 7200 isn't cheap by any means, but its iBias technology delivers bliss for a relatively low cost per channel when compared against the cost of traditional high-end Class A amps. If you're in the market for a new amp and are a member of the cost-is-little-object crowd, definitely check out the Chorus 7200 from Krell. You won't be disappointed. ♦

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# Escapes

BY Kim Wilson  
PHOTOS William Psolka, [psolka-photo.com](http://psolka-photo.com)

TECH IN A CENTURY-OLD HOUSE

## A Little Old, a Little New





## TOTAL INTEGRATION

This whole-home electronics install includes audio, video, lighting, control, and security throughout the entire home, as well as in the dedicated theater space.



**FIFTY SHADES**  
While the rest of this residence is decked out in homey wood paneling and warm ivory tones, the theater room sports a soothing, neutral shade of gray.



The owners of this house were building their dream home, with the expectation of fully integrated systems throughout the house, which would include 12 televisions, multiple zones of music, a dedicated theater, interior and exterior lighting, security, and more. This kind of complex whole-home project is nothing new to Electronics Design Group (EDG), of Piscataway Township, New Jersey. However, the challenge here was that the house was over 100 years old and was being rebuilt to keep its early 1900s aesthetics.

A Savant control system effortlessly integrates 16 zones of audio and 12 HD video sources distributed throughout this 9,000-square-foot residence. Eight terabytes of RAID storage and Luxul wireless networking gives the client a wide range of entertainment options.

With respect to the theater, the client had a strict budget. So, to ensure the full theater experience, the design had to be very concise. Ongoing or progressive design changes were not an option. The homeowners wanted a theater that wouldn't require massive upgrades every few years.

The finished theater looks and sounds a lot more expensive than the established budget. It took tight communication and collaboration with all the trades to stay within the inflexible budget and still get the performance of a high-end theater.

The theater's centerpiece is an Elite Screens 125-inch fixed projection screen coupled with an Epson Pro Cinema projector. The 7.1-channel sound system consists of Klipsch Theater Series speakers along with a Klipsch 18-inch subwoofer, an Integra networked A/V controller, Crown Power amplifiers, and Savant iPad and iPhone control.

The success of this project can be attributed to the collaborative effort between the architect, all the various trades, and the client. The high level of integration throughout the home is reliable and easy to use. EDG reports that its meticulous design and hard work were ultimately reflected back as high client satisfaction—always the end goal.

**Contact** Electronics Design Group, (732) 650-9800, [edgonline.com](http://edgonline.com)

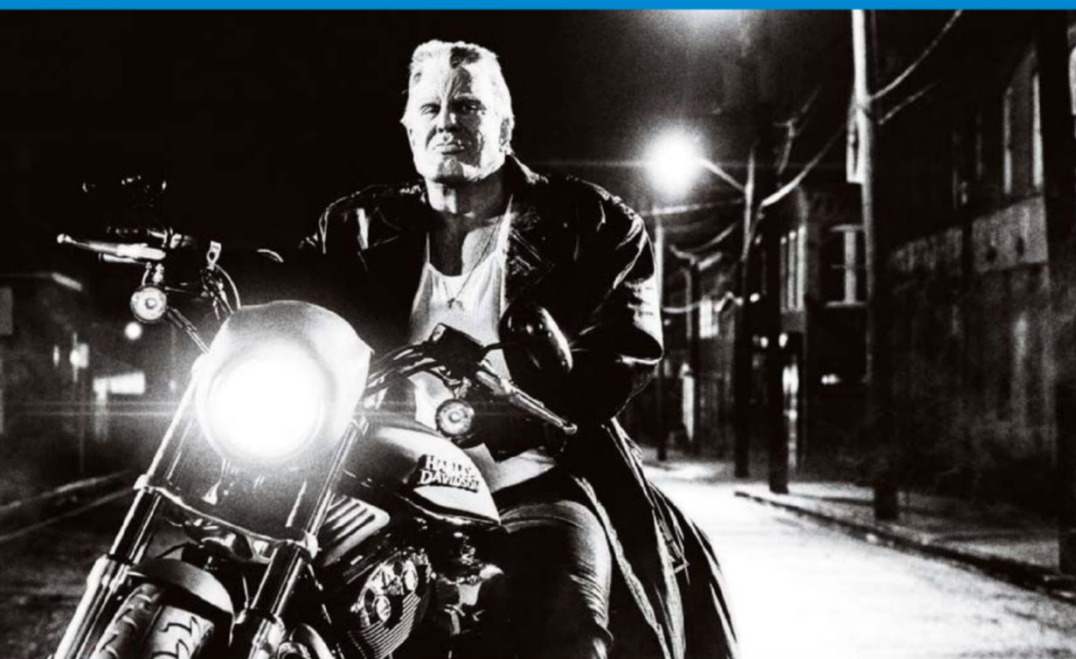
Readers, **we need your help!** Are you a do-it-yourselfer or custom installer with a great theater to share with our readers? We'd love to hear from you. Please send your stories and photos to [kimwilson@cewritr.com](mailto:kimwilson@cewritr.com).



# Entertainment Reviews in High Definition

## BLU-RAY 3D

### Sin City: A Dame to Kill For



## Black and White in Color



Sin City: You will never find a more wretched hive of scum and villainy. In *A Dame to Kill For*, the second big-screen adaptation of the works of writer/artist/director Frank Miller, we find

that stripper Nancy (Jessica Alba) has been driven cuckoo-bananas by the events surrounding the death of her hero and one true love a few years ago. She now finds herself shadowed by the ghost of Bruce Willis (where have I seen that before?) and hungry for revenge against the most powerful man in town. Dwight (Josh Brolin, replacing Clive Owen), meanwhile, is a good man with a dark side who's being sucked back into a dangerous relationship with the wrong dame. The movie consists of four yarns altogether, bound by the seedy locale, although two of them don't really go much of anywhere, frankly. The violence remains extreme, which isn't a problem except that it can seem gratuitous this time, not necessarily in service to the plot.

The visual style has definitely evolved since the 2005 original *Sin City*, with even



**BLU-RAY 3D**

**STUDIO:** Anchor Bay Entertainment, 2014

**ASPECT RATIO:** 1.85:1

**AUDIO FORMAT:**

DTS-HD Master Audio 5.1

**LENGTH:** 102 mins.

**MPAA RATING:** R

**DIRECTOR:** Robert Rodriguez & Frank Miller

**STARRING:** Jessica Alba, Mickey Rourke, Josh Brolin

more reverence for the graphic novels that provide much of the source material. The quality and the credibility of the special effects have leapt forward as well, with lots happening on screen. Still evident is the striking overall look, stark monochromatic contrast marked with accents of bold color. Pure, lush blacks are everywhere. In fact, this 1.85:1 image with its crisp digital focus is as close to video perfection as I've seen in the past year.

Fellow director Robert Rodriguez has been one of the more vehement proponents of 3D, and his dynamic camera work is practically a commercial for the format. A view down the street in Old Town displays striking, inviting depth, while the cut-and-paste filmmaking technique that combines multiple

## RATINGS

|                | Poor | Fair | Good | Excellent | Reference |
|----------------|------|------|------|-----------|-----------|
| <b>PICTURE</b> | ★    | ★    | ★    | ★         | ★         |
| <b>3D-NESS</b> | ★    | ★    | ★    | ★         | ★         |
| <b>SOUND</b>   | ★    | ★    | ★    | ★         | ★         |
| <b>EXTRAS</b>  | ★    | ★    | ★    | ★         | ★         |

actors, often filmed separately, with elaborate computer-generated backgrounds and foreground objects lends itself to dramatic compositions. Elements of snow, smoke, and steam add even more eye-popping layers.

The DTS-HD Master Audio 5.1-channel soundtrack flaunts amazing, seamless directionality across the soundfield, just the thing for whizzing bullets and zooming automobiles. The weather is convincingly simulated in multiple speakers, one particularly effusive spray of blood practically fills the room, and discrete surrounds are thoughtfully utilized to establish off-camera action. A generous infusion of powerful bass is balanced by the frequent bright tinkling of broken glass.

But whereas the first movie on Blu-ray—and even DVD—was practically overflowing with bonus content, the pickins here are a tad meager. Once again, we're given a sped-up look at the entire movie in its raw green-screen form, before the virtual sets and other changes were applied, a fascinating testament not only to the talented technical crew but to the actors who manage to do so much with so little. The profiles of four key characters have their moments, as do featurettes about the makeup and the stunts. All of these extras are on the 2D Blu-ray, but commentary and Rodriguez's trademark "10-Minute Film School" and "10-Minute Cooking School" are nowhere to be found. A DVD of the movie and extras and an UltraViolet HD Digital Copy are provided.

*Sin City* must be a horrible place to live, although stopping for a couple of hours every once in a while sure is interesting.

● Chris Chiarella

soundandvision.com

|                |       |
|----------------|-------|
| <b>PICTURE</b> | ★★★★★ |
| <b>3D-NESS</b> | ★★★★★ |
| <b>SOUND</b>   | ★★★★★ |
| <b>EXTRAS</b>  | ★★★★★ |

It's bad. It means going up against a lot of guns."





## HERCULES

Paramount

### DOES LIFE LIVE UP TO THE LEGEND?

Life isn't easy when you're the bastard child of Zeus, father of all Gods, and your name happens to be Hercules. In ancient Greece, it was commonplace for the Gods to descend from Mount Olympus to fornicate with humans and leave mortal offspring in their wake. But Zeus' infidelity incurred the vengeful wrath of his wife, Hera, who wanted to destroy his illegitimate progeny. When killing Hercules proved problematic, she instead did the next best thing and drove him to madness and the murder of his own wife and children. Remorse then prompted him to undertake his twelve impossible labors to purge himself of his crime. Or so the legend goes.

This latest cinematic retreat—the second of two in 2014, in fact—takes the classic myth with a hefty grain of salt and portrays its tortured protagonist more as just a big bad-ass dude who roams the countryside with his band of merry miscreants fighting not for justice or glory but for gold. The stories of his divine origin and exploits have been bloated and exaggerated as an instrument of fear and intimidation, and why not? It's a hell of a marketing tool. Hercules and his mercenaries are soon recruited by a wealthy and powerful king to train and lead an army against a horde of rebels, and the lucrative offer is too good to refuse. Plenty of chaos and carnage ensues from there. Whoopie-doo.

The 3D version of the film offers consistent and admirable depth of field and clarity with only intermittent halo and ghosting effects. Indeed, numerous shots seem tailor-made for the 3D format and make ample use of it. It at least holds your attention visually when the story starts to lag. The 2D Blu-ray contains two versions of the film and all the extras. The Extended Cut boasts "exciting action not shown in theaters," which I find perplexing because it occupies a whole two extra minutes of screen time. Both 2D versions look and sound terrific, I have to say. Not surprisingly, the 7.1 DTS-HD Master Audio is exemplary on all levels. It excites and entices with subtle background ambience in the quieter scenes and thunders impressively in the scenes of combat and chaos.

Extras include 15 deleted and extended scenes apparently deemed not good enough for the Extended Cut, featurettes, and an audio commentary with director Brett Ratner and producer Beau Flynn. Bonus DVD and Digital Copy are included. ● **Corey Gunnestad**



**BLU-RAY 3D**  
**STUDIO:** Paramount, 2014  
**ASPECT RATIO:** 2.40:1  
**AUDIO FORMAT:**  
 DTS-HD Master Audio 7.1  
**LENGTH:** Theatrical Cut: 98 mins.;  
 Extended Cut: 101 mins.  
**MPAA RATING:** Theatrical Cut:  
 PG-13; Extended Cut: Unrated  
**DIRECTOR:** Brett Ratner  
**STARRING:** Dwayne Johnson, Rufus  
 Sewel, John Hurt

|         |       |
|---------|-------|
| PICTURE | ★★★★★ |
| 3D-NESS | ★★★★★ |
| SOUND   | ★★★★★ |
| EXTRAS  | ★★★★★ |



## JERSEY BOYS

Warner Bros.

### WALK LIKE A HAM

Post-war Belleville, New Jersey—an impoverished suburb of the impoverished city of Newark—offered few opportunities for upward mobility. The hottest tickets to the middle class were joining the army or joining the mob—either of which could get one killed—or becoming an entertainer. Francis Castelluccio (John Lloyd Young) and his friends were fortunate and talented enough to choose the latter. Adapted from the wildly successful Broadway play, *Jersey Boys* is the mildly embellished story of Frankie Valli and the Four Seasons, the most popular rock group until The Beatles, who thrived despite the personal tragedies, prison sentences, and personal excesses that attended stardom. Unfortunately, the story doesn't translate well to the big screen. The carefully calculated dramatic scale that works so well as a stage play is disproportionate here, as both dialogue (especially the jokes) and acting seem bloated and forced.

Production values fare much better, featuring lavish set design, authentic wardrobe, and standard-setting sound and image quality. The beautifully balanced color palette avoids saturation, with natural reds that yield perfectly rendered fleshtones. Even during concert scenes, the harsh stage lighting never imparts contrived pallor to skin. Whites are meticulously reproduced, while at the opposite extreme, black levels are deep and detailed. Shadow detail is impressively layered, and contrast is vast. Most impressively, fine textural details—fabrics, hair, chrome trim on vintage Cadillacs—are razor-sharp.

Audio, though lacking much in the way of hard surround effects, is the equal of video. Dialogue articulation is almost flawless, and center fill is both consistent and generous. Musical numbers issue forth with the detail and tonal balance of a good CD, and there's plenty of low-frequency extension to keep your subwoofer occupied. The soundtrack is cannily blended into the surround channels, keeping the *Jersey Boys* experience enveloping and immersive. From both audio and video standpoints, this is a superb Blu-ray transfer.

The disc's three extras are well produced and worthwhile, though insufficient. Although it doesn't live up to its considerable hype, *Jersey Boys* is essential viewing for music history buffs. Broadway meets Hollywood for two hours of escapist fun.

● **Anthony Chiarella**



**BLU-RAY**  
**STUDIO:** Warner Bros., 2014  
**ASPECT RATIO:** 2.39:1  
**AUDIO FORMAT:**  
 DTS-HD Master Audio 5.1  
**LENGTH:** 134 mins.  
**MPAA RATING:** R  
**DIRECTOR:** Clint Eastwood  
**STARRING:** John Lloyd Young, Erich  
 Bergen, Michael Lomenda

|         |       |
|---------|-------|
| PICTURE | ★★★★★ |
| SOUND   | ★★★★★ |
| EXTRAS  | ★★★★★ |





## WHAT IF

### FRIENDS WITHOUT BENEFITS?

Sony Pictures

**▶** Wallace has not been lucky in love. He dumped his last girlfriend when he caught her cheating on him and was so dejected he ended up dropping out of medical school and moving in with his sister and her young son. Shut away from the world for almost a year, he decides to attend his ex-college roommate's party where he meets the perfect girl and gets her phone number right before she drops the bombshell that her boyfriend is waiting for her at home—some guys can't catch a break. After Wallace's previous relationship, he doesn't want to be "that kind of guy" and discards her number. As luck would have it, he runs into her a few weeks later at the movies and the pair decide to just be friends—but what if something more develops?

The first scene of the movie is very awkward and uncomfortable, much like our protagonist. But the screenplay really grew on me due to the likability of Daniel Radcliffe's character and his onscreen chemistry with Zoe Kazan. As with most romantic comedies, you know where it's going to eventually end up, but the ride getting there is where the fun is as the two develop a close-knit friendship that's bound to get hot and steamy.

Shot on an Arri Alexa camera, the 1080p presentation definitely delivers the goods. Outdoor shots look the best where the natural light brings out the fine detail of clothing and facial textures. The nighttime scenes and interior shots don't fare quite as well, as the shadows can get a bit murky. Similarly, the color palette in exterior shots definitely has more zest and pop. Like most films in the genre, the audio track is dialogue-intensive, with a plethora of catchy tunes, which is where the DTS-HD Master Audio 5.1 track really shines.

The repetitive supplemental package includes three deleted scenes, a featurette dubbed "Blurred Lines" on the characters and plot of the film, a behind-the-scenes look with cast and crew interviews, a second look at the characters in "Opposites Attract," and if you're a slow learner or weren't paying attention to the previous featurettes, there's a third introspective look at the film in "A Modern Love Story."

Casting can really make or break a film, and that's certainly the case here. If Radcliffe wasn't the star, I'm not sure I would have stuck with this gem of a picture after the first 20 minutes; but I'm glad I hung in because the payoff was quite pleasing. Recommended. **David Vaughn**


**BLU-RAY**
**STUDIO:** Sony Pictures, 2013

**ASPECT RATIO:** 2.35:1

**AUDIO FORMAT:**

DTS-HD Master Audio 5.1

**LENGTH:** 98 mins

**MPAA RATING:** PG-13

**DIRECTOR:** Michael Dowse

**STARRING:** Daniel Radcliffe, Zoe Kazan, Rafe Spall


## IT HAPPENED ONE NIGHT

### ON THE ROAD IN SCREWBALL LOVE AND DEPRESSION

Criterion Collection

**▶** A charmer of a film, deeper, even grittier than its Capra-corn romantic populism might suggest, *It Happened One Night* swept the 1934 Oscars—winning Best Picture, Actor, Actress, Screenplay, and Director—and if it hadn't edged out *The Thin Man* in doing so, I'd say, Bravo, well deserved. The story is a classic class-crossing fable: A spoiled rich girl runs away from her father to join the king she wants to marry; a hardscrabble newspaperman finds her, blackmails her into letting him come along to write a story; they take to the road, by bus, foot, thumb, and jalopy, squabbling, scolding, and, of course, falling in love with each other. Yes, it's predictable and sentimental, but it's also funny—one of the first screwball comedies—and genuinely (but not at all carnally) erotic. Gable and Colbert spark like few mismatched couples in the movies have since. Some of Gable's lines (about how you've got to slap a woman around sometimes) seem jarringly anachronistic, but soon it's clear that his character has vulnerabilities and the tough talk is a cover: There's a modern sensibility within the antique formula.

The film was made, and takes place, five years into the Depression, which adds crackle and sorrow to the class tensions driving the plot. Capra exudes a sensuous feel for American life, from posh hill to skid row and the roads and train tracks in between. Capra was famously sentimental about the determination and decency of common Americans, but he didn't shy away from the abyss that lurks a few false steps away. And his cinematographer, Joseph Walker (who also worked on *It's a Wonderful Life*, *Mr. Smith Goes to Washington*, and other Capra films), lights a picture, by turns, haunting and gorgeous.

Criterion Collection's 1080p transfer—struck from a 4K master of a 35mm safety composite fine-grain of the original nitrate negative and a 35mm nitrate print—captures the look with greater clarity and contrast than you might think possible with an 80-year-old film. It's not as luscious as some Blu-ray Discs of black-and-white classics made a decade later (*Casablanca*, *The Maltese Falcon*, *Citizen Kane*), but good elements were hard to track down, and, in any case, it's a handsome picture nonetheless—in some scenes, swooningly so.

The special features are superb, especially a documentary about Capra, directed by Ron Howard, and a very smart discussion of the film by critics Molly Haskell and Phillip Lopate. **Fred Kaplan**


**BLU-RAY**
**STUDIO:** Criterion Collection, 1934

**ASPECT RATIO:** 1.33:1

**AUDIO FORMAT:** 24-bit monaural

**LENGTH:** 105 mins.

**MPAA RATING:** Unrated

**DIRECTOR:** Frank Capra

**STARRING:** Clark Gable, Claudette Colbert, Walter Connolly






## THE SKELETON TWINS

### THESE KIDS AREN'T ALL RIGHT

Lionsgate



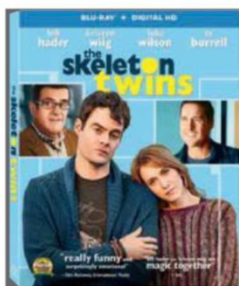
Surely Bill Hader and Kristen Wiig are two of the more interesting people working in Hollywood right now. With his diverse mile-long résumé and her Oscar nomination (for co-writing *Bridesmaids*) and indie cred, plus their shared *Saturday Night Live* pedigree, we never know quite what we'll get next from them. *The Skeleton Twins* is not their first big-screen pairing, but it's their most significant, as they play same-age sibs Maggie and Milo, estranged for the past 10 years and now suddenly reunited as they grapple with their own issues. The entire cast is top-notch, and the humor grows from the subtlety of the performances. But it's when Hader and Wiig are together that the movie truly shines, bringing both comedy and drama as dark family secrets are confronted.

At first I thought the color would only be restrained in the opening home-movie-style prologue, but the palette is somewhat muted throughout, although the blue of Wiig's eyes is at times a vibrant standout. This is surely not a reference-quality disc, as many shots seem to have a softness to them, and yet certain details are frequently razor-sharp, such as pores in the close-ups and especially the textures of clothing. Shafts of hazy sunlight and bits of dust are appreciable, although I found the curious, undeniable layer of grain on the 2.4:1 image to be a bit much.

Don't be fooled, as I was, by the DTS-HD Master Audio 5.1 designation on the back cover: This soundtrack is definitely front-heavy, but that's not such a bad thing. Dialogue is crucial here, and it is almost always clear, while the full, wide spread across left/center/right has a pleasing, natural presence. It almost makes up for the fact that every time I checked the surround speakers, even during busier moments when I was expecting at least a little involvement, they were silent. Nuances such as room tone can be readily heard at times, and can change from scene to scene.

Since cast and crew brought great enthusiasm to this project, the extras now reflect that passion. There are two audio commentaries by director/co-writer Craig Johnson. Also included are a dedicated making-of, an amusing (and uncensored) gag reel, an array of alternate takes and actor improvisation, in addition to 16 minutes of deleted scenes with optional commentary. A code for a high-definition UltraViolet Digital Copy is supplied as well.

● Chris Chiarella



#### BLU-RAY

STUDIO: Lionsgate, 2014

ASPECT RATIO: 2.40:1

AUDIO FORMAT:

DTS-HD Master Audio 5.1

LENGTH: 93 mins.

MPAA RATING: R

DIRECTOR: Craig Johnson

STARRING: Bill Hader, Kristen Wiig, Luke Wilson

#### PICTURE

★★★★★

#### SOUND

★★★★★

#### EXTRAS

★★★★★



## L'AVVENTURA

### BEAUTIFUL MEANINGLESSNESS

Criterion Collection



A modernist masterpiece as revolutionary as Picasso's *Demoiselles d'Avignon* made in a time when film was important, *L'Avventura* tells the story—or anti-story—of a wealthy young woman on a boating trip who disappears off an island. After a search of the barren rock, her fiancé and best friend set off to find her, investigating sites where she's supposedly been seen. Over the course of their travels, they become involved and gradually forget about what they're searching for. *L'Avventura* is a whodunit without a who, a mystery without a solution, a dislocation of the already dislocated. In the process, director Michelangelo Antonioni peels away the skin of society as characters play at love without enthusiasm, sincerity, or context in ennui of unaware existential numbness. As in *Blow Up* and other Antonionis, *L'Avventura* is about absence—feelings are forgotten, meaning and purpose are misplaced, and “words are more and more pointless.”

In Criterion's completely restored picture created in 4K resolution from the 35mm camera negative, contrast is excellent. There's a gorgeous array of grays, and even in black and white, everything looks exceedingly naturalistic and present, in lapping seas, rugged cliffs, and suntanned skin. The immensely in-depth compositions are clear and crisp, with great detail throughout. There's texture and a tactile quality to rocks, gravel, and weathered wooden doors, while water drops glisten. The film looks like it could have been shot today.

There's some slight hiss, but Giovanni Fusco's cha-cha-cha opening—signifying up-to-dateness (for 1960)—is clear, full, and crisp.

Amongst memorable extras, film historian Gene Youngblood's

wonderfully analytical commentary cites how *L'Avventura* was so complex, it was booed at Cannes and then awarded a special jury prize for its new cinematic language. Two years later, it was judged by 100 critics to be third greatest film of all time. Youngblood also brilliantly dissects meaning inherent in each beautiful image. An in-depth, hour-long documentary on Antonioni narrates his life story and portrays his filmmaking career. An interview with director Olivier Assayas provides more thoughts on the evolutionary filmmaking, and Jack Nicholson (who starred in Antonioni's *The Passenger*) describes his experiences and reads essays by the director who refuses to explain the film. ● Josef Krebs



#### BLU-RAY

STUDIO: Criterion Collection, 1960

ASPECT RATIO: 1.85:1

AUDIO: Linear PCM 1.0

LENGTH: 143 mins.

MPAA RATING: NR

DIRECTOR: Michelangelo Antonioni

STARRING: Monica Vitti, Gabriele Ferzetti, Lea Massari

#### PICTURE

★★★★★

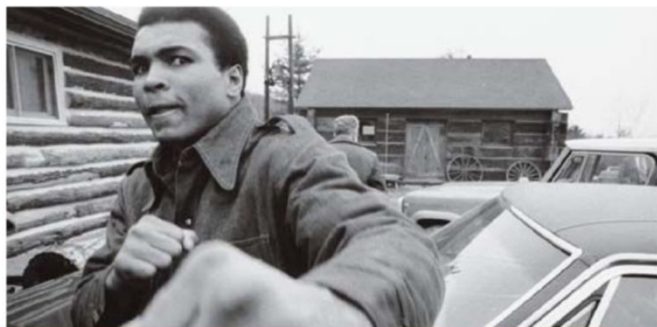
#### SOUND

★★★★★

#### EXTRAS

★★★★★





## I AM ALI

Universal

### A SOFTER SIDE OF "THE GREATEST"

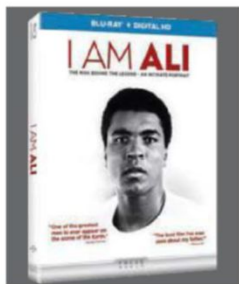
**▶** In 1999, *Sports Illustrated* voted Muhammad Ali its "Sportsman of the Century." Ali unquestionably deserves this honor, but it doesn't begin to convey his importance. Political martyr, civil rights activist, religious zealot, and all-around hero, Ali was one of the 20th century's greatest figures and, during the '70s, the most recognizable person on earth. Ali has been the subject of countless films including the brilliant *When We Were Kings*, 1997 Oscar-winner for Best Documentary. Whereas *Kings* idealized Ali, *I Am Ali* humanizes him, showing him as father, friend, and husband, a portrait made possible by access to Ali's audio journals. These tapes, together with rare archival footage and present-day reminiscences from Ali's friends, peers, and family, form the foundation for director Clare Lewins' intimate documentary.

No one will purchase *I Am Ali* as a showoff disc, and it's hard to criticize the sound and image quality of old film clips; however, many of them seem to have been cleaned up for this documentary. As for the modern "testimonial" footage, cinematographer Stuart Luck presents a series of portraiture-quality frames, beautifully composed, although a persistent reddish saturation compromises fleshtones. Many interviewees are filmed in harsh, direct lighting, which sometimes imparts a stark, severe quality. Image detail is superb, as is evidenced in skin and clothing textures. Whites, blacks, and every shade in between are well rendered, as gray scale and contrast are gloriously reproduced. Shadow detail is uniformly excellent.

Audio is dominated by the low-fidelity vocals of ancient film clips and audio tapes, although great care has been given to optimizing detail and clarity. With both vintage and current footage, the dialogue channel is notably crisp and realistic. Simon Bass' lovely soundtrack is convincingly reproduced by both front and rear channels, but there's little evidence that the disc features DTS-HD Master Audio 5.1.

The Blu-ray includes five extras, though the first four are nothing more than a continuation of the film's testimonials. Although these clips provide additional insight about Ali, they tell us nothing about the creation of the documentary: a major disappointment. *I Am Ali* is required viewing, not for sports alone but for anyone who cares about The American Century. Hopefully, that's all of us.

● Anthony Chiarella



#### BLU-RAY

STUDIO: Universal, 2014

ASPECT RATIO: 1.85:1

AUDIO FORMAT:

DTS-HD Master Audio 5.1

LENGTH: 112 mins.

MPAA RATING: PG

DIRECTOR: Clare Lewins

STARRING: Muhammad Ali, Hana Ali, Maryum Ali



## THE GIVER

Anchor Bay

### UTOPIA HAS SOME SERIOUS DESIGN FLAWS

**▶** In the utopian community of *The Giver*, citizens have been relieved of the burden of having memories beyond their own lives. Human history has been erased. The logic being that if you have no memory of the past, you won't be doomed to repeat it. Daily mandatory injections chemically stifle personal ambition, curiosity, and primordial urges, and Big Brother is ever watchful. The established rules are these: Use assigned language, wear the approved clothing, take your daily medication, obey the curfew, and never lie.

Every adolescent enters their stage of maturation in a graduation ceremony in which their life vocations are issued to them by a committee of elders, but a promising young man named Jonas is selected for a very special assignment. There is one among the elders called "The Giver," and this man is the sole custodian of all the memories of human history. The time has come once again for The Giver to take on an apprentice and pass the torch of knowledge to a "Receiver." Jonas is bequeathed visions of real human experience and emotion, and he gets his first real taste of love, freedom of choice, and individualism, but also pain and sorrow. As exhilarating as the experience is, Jonas is forbidden from sharing his remarkable revelations with anyone. He inevitably rebels against his "perfect" society and becomes a dangerous threat to the established order.

*The Giver* begins in a world that is stark black and white, thematically and literally. Color gradually breathes into the scenery as Jonas gains more and more insight, and the full-color exteriors offer the most vibrant and solid imagery here. The 5.1 DTS-HD Master Audio is a solid and pleasing mix that provides a consistently even atmosphere of dialogue, sound effects, and score but doesn't often excite and overwhelm the senses.

Extras include featurettes, one extended scene, and a rare video provided by Jeff Bridges of the first script reading of *The Giver*.

Science fiction has always offered powerful and sobering parables about the encroaching dangers of fascism in a free-thinking society. George Orwell's *1984* and Fritz Lang's *Metropolis* are two early examples of many. Stories may differ, but the central theme is unchanged; "No perfect world is perfect without free will." *The Giver* explores that familiar and compelling theme but ultimately falls short of a substantial payoff. ● Corey Gunnestad



#### BLU-RAY

STUDIO: Anchor Bay, 2014

ASPECT RATIO: 2.39:1

AUDIO FORMAT: DTS-HD Master Audio 5.1

LENGTH: 97 mins.

MPAA RATING: PG-13

DIRECTOR: Phillip Noyce

STARRING: Jeff Bridges, Meryl Streep, Brenton Thwaites





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# CHILD IS FATHER TO THE MAN / SUPER SESSION BLOOD, SWEAT & TEARS / BLOOMFIELD, KOOPER, STILLS



Photo by Mike Sullivan

Al Kooper coulda been a contender—contender for being acknowledged as one of the most forward-thinking surround sound mixmasters, that is. It's been well known in audiophile circles that Kooper had long ago turned in “interesting” 5.1 mixes to Sony for a pair of albums he personally had stakes in—Blood, Sweat & Tears’ trippy big-band-influenced debut, *Child Is Father to the Man* (originally released February 1968) and Mike Bloomfield, Al Kooper, and Steve Stills’ still influential jam amalgamation, *Super Session* (July 1968). Both mixes gathered multichannel dust on the corporate shelves until almost a full decade later, when Audio Fidelity released them from captivity by way of Hybrid Multichannel SACD.

While Steve Hoffman handled the stereo layers of each release, surround is where it's at to experience the full weight of Kooper's all-channel audio vision for both albums. Each 5.1 mix shows his inherent understanding of texture, placement, and how to best spotlight musicians expert at improv and soloing in a group context, in whichever channel(s) he deems best.

In the liner notes for both releases, Kooper cites his allegiance to the 5.1 mix Mark Linett did 15 years ago for The Beach Boys’ seminal *Pet Sounds*. Linett’s philosophy was to take a “very wide approach” to the soundstage, with a focus on getting the desired imaging and reverb in the front channels by hardly using the center channel at all, instead counting on the phantom center created by the left and right speakers (an approach approved by Beach Boys aural mastermind Brian Wilson). Add in the adventurous, full-channel rotational spirit favored

by Dave Fridmann and Wayne Coyne for The Flaming Lips’ 5.1 universe alongside some choice of-era psychedelia, and you’ve got Kooper’s recipe for both of these mixes.

The original 8-track multitrack recording of BS&T’s *Man* gave Kooper a few hurdles to overcome. Jim Fielder’s bass and Steve Katz’s guitar were on the same track, and the horns were on two tracks—two trumpets (Randy

Brecker and Jerry Weiss) on one, saxophone (Fred Lipsius) and trombone (Dick Halligan) on the other. Once the tracks were separated, Kooper was able to retain the verve of the originals even as he opened up their respective dynamic characters. “I Love You More Than You’ll Ever Know” swings hard, with Kooper’s pleading lead vocal moving from back to front depending on the verse, his own organ fills supplementing the drama and interweaving with Katz’s guitar in the song’s back half, more often than not in the two leftmost fields. The horns stab

through the proceedings at times, swelling in volume for emphasis as needed. Speaking of those horns, they’re given an energetic, fully rotational, clockwise thrust in the final, 30-second fugue section of “Just One Smile.” Meanwhile, “House in the Country” vacillates from putting you right in the middle of a human farm and raucous barrelhouse barroom, with off-kilter support from Bobby Colomby’s backwards tambourine hits regularly zipping across the rear channels.

And then came *Super Session*, wherein Kooper serves as the glue between the divergent guitar vibes of Mike Bloomfield (tracks 1–5) and Steve (née Stephen) Stills (tracks 6–9). Again, Kooper works his magic from 8-track multitrack masters. Lead track “Albert’s Shuffle” exemplifies the Kooper-Bloomfield push-pull that would stretch over years of intuitive collaboration. Bloomfield takes the literal lead from the get-go, with Kooper’s organ serving as a bob-and-weave cocoon around the volume-prominent guitar lines, and then the two switch lead/support roles about halfway through. And on “His Modal Majesty,” Kooper’s whiplash-inducing, channel-traveling Ondioline vibrato gets buttressed by Bloomfield’s supportive janglings.

The second half unfolds with a cover of Bob Dylan’s “It Takes a Lot to Laugh, It Takes a Train to Cry,” commencing with a glorious needle scratch, followed by heady vocal effects and Stills’ instantly identifiable gnarly ‘n’ gnoodly guitar tone, moving from the front right to the rear left before his solo slithers into the rear channels.

The tour de force is the 11-minute cover of Donovan’s “Season of the Witch,” the byproduct of Kooper sewing together two amazing albeit different-tempoed takes. Midway through, Kooper gets lost in scattering the vocals, the volume of his wailing increasing along with the intensity of the horns, and his sharp enunciation of “witchhhh” about 8:30 into the track is as clear, heartfelt, and spent as intended.

Somewhere, someone should be spray-painting the phrase, “What would Al do in 5.1?” on a studio wall—or at least make it a popular hashtag. Based on the fully enveloping work Kooper has done on these two impeccable SACDs, the mind is absolutely aswirl with the possibilities. Bravissimo, maestro Al. **Mike Mettler**

A Mettler-Kooper Q&A about the genesis of these two 5.1 SACD mixes appears in the *S&V Interview* blog on [soundandvision.com](http://soundandvision.com).



|                                                                                                                                   |  |
|-----------------------------------------------------------------------------------------------------------------------------------|--|
| <b>SACD</b>                                                                                                                       |  |
| <b>LABEL:</b> Audio Fidelity                                                                                                      |  |
| <b>AUDIO FORMAT:</b> 2.82-MHz/<br>1-bit DSD                                                                                       |  |
| <b>NUMBER OF TRACKS:</b> 12 (BS&T), 9<br>(Super Session)                                                                          |  |
| <b>LENGTH:</b> 49:24 (BS&T), 50:24<br>(Super Session)                                                                             |  |
| <b>PRODUCERS:</b> Al Kooper (both<br>multichannel mixes, and Super<br>Session); John Simon (BS&T)                                 |  |
| <b>ENGINEERS:</b> Fred Catero (BS&T),<br>Bob Breault (Super Session),<br>Steve Rosenthal and Matt<br>Boynton (multichannel mixes) |  |
| <b>BS&amp;T</b>                                                                                                                   |  |
| <b>PERFORMANCE</b> ★★★★★                                                                                                          |  |
| <b>SOUND</b> ★★★★★                                                                                                                |  |
| <b>SUPER SESSION</b>                                                                                                              |  |
| <b>PERFORMANCE</b> ★★★★★                                                                                                          |  |
| <b>SOUND</b> ★★★★★                                                                                                                |  |

Photo by Stewart Woodward







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PREMIERE  
DESIGN

# A Do-It-All Processor, at a Price



## Steinway Lyngdorf P200 Surround Processor

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At last September's CEDIA Expo, Steinway Lyngdorf offered a sneak peek of the P200 surround processor it plans to start selling in early 2015 for \$18,000. (No, that's not a typo.) The P200 distinguished itself as the first processor to support both Dolby Atmos and Auro-3D. To get the story behind this one-of-a-kind product, we spoke with CEO/CTO Thomas Birkelund.

**S&V:** What led to the decision to incorporate Dolby Atmos and Auro-3D?

**TB:** Early on in the design process, we saw that a defining market trend in coming years would be immersive surround sound installations. We built the P200 to be as flexible as possible, and we are therefore able to offer support of Dolby Atmos, Auro-3D, and the newly announced DTS:X.

**S&V:** Atmos has momentum in the U.S., whereas Auro-3D seems to have a stronger foothold in other parts of the world. Will Auro be a factor in the U.S.?

**TB:** That is hard to say. The U.S. market will be very hard to enter for an outsider, and none of the established companies will give up market share without a fight.

**S&V:** What key technologies differentiate the P200 from other processors?

**TB:** In addition to offering full support of immersive surround sound formats, the Model P200 also handles 4K and 3D video, HDCP 2.2, and highly advanced HDMI switching.

**S&V:** What technology is used for video upscaling?

**TB:** The P200 uses 4K Ultra HD video processors from Silicon Image that feature VRS ClearView technologies (supported individually on each P200 output: 4 x HDMI, 1 x HDBaseT). It implements a 4K adaptive scaler (full 10-bit) to deliver automatically optimized performance for all sources.

**S&V:** Your literature says the P200 is "capable of handling up to 16 native channels and up to 256 output channels." Can you explain?

**TB:** We can input up to 16 channels to the processor. These can be 16 discrete channels or 16 decoded channels from a Blu-ray with Dolby Atmos or Auro-3D. On these 16 channels, we can add digital signal processing, like RoomPerfect [which adapts the sound to the room]. In addition to the eight Analog Device SHARC DSPs in the P200, we also have DSP capability in our amplifiers. That means the bigger the system, the more DSP capability you will have. It also means that from these 16 channels we can make up to 256 amplified channels using our four-channel Model A2 amplifier.

**S&V:** Atmos and Auro-3D implement height channels differently. Which creates a more convincing experience?

**TB:** They are different from each other, but the recommended speaker placements also overlap in a lot of ways. We don't feel that one is more convincing and do not recommend one over the other. Until we see more available material, it is way too hard to tell which one will be the recognized market leader.—*Bob Ankosko*

*An extended version of this interview appears on [soundandvision.com](http://soundandvision.com).*

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## Jim Anderson

Jim Anderson is an internationally recognized recording engineer and producer working in the recording, film, television and radio industries. Winner of ten Grammys and nominated 26 times, Jim also received two George Foster Peabody Awards for his work in radio as well as two Emmy nominations for television programs. He has served as President of the Audio Engineering Society, 2008-2009.



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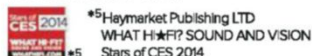


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## TD-M1

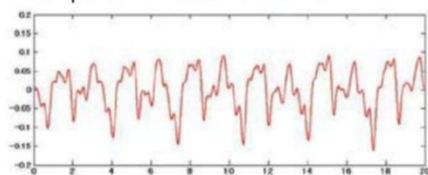
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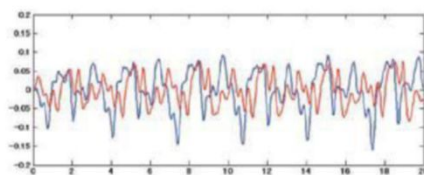
**High-resolution audio can provide improved sound quality, but many speakers can degrade sound quality to a greater extent. Did you know this?**

### ■ Comparison of music waveforms:

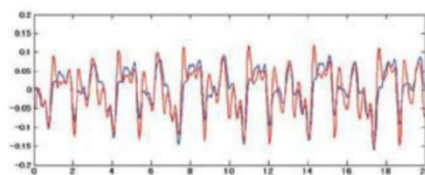


CD vs. high-res audio

At this scale, the differences can't be seen



CD vs. example conventional  
3-way speaker output



CD vs. TD712zMK2 output

Differentiating how various speakers sound is easier than differentiating CD sound to how high-resolution audio sounds. It's just because sound degraded by speakers is much more apparent than the improvement in sound quality that high-resolution audio can provide.

### Have you noticed that the sound you hear is coming from your speakers?

Imaging and soundstaging greatly depend on subtle level balances and time differences from the left and right speakers. When sound degrades, soundstaging is relegated to sounding as though pasted right on the speakers. The more accurate your speakers are, you will hear sound away from the speakers, sounding more from the position of the recorded sources.

### Are your speakers delaying low frequencies?

Most multiple driver speakers delay low frequencies due to the crossover and speaker transient response phase characteristics. Conventional audio evaluation tends to focus on tonality (frequency response), but if fully appreciating an artist's performance and intention is what you want, rhythm and timing (rise time and decay) are just as important.

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